

HACKENSACK RIVER CORRIDOR STUDY

BERGEN COUNTY DEPARTMENT OF PLANNING & ECONOMIC DEVELOPMENT

BERGEN COUNTY DEPARTMENT OF PARKS

GREEN ACRES

STATEMENT OF COMPLIANCE

HD
268
.H33
H33
1989

AUGUST 1, 1989 REVISED SEPTEMBER 1, 1989

COUNTY OF BERGEN
New Jersey

William D. McDowell
County Executive



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HACKENSACK RIVER
CORRIDOR

study/prepared by:

ENVIRONETICS, INC.
7 Lakebridge Drive South
Kings Park, NY 11754

Property of CSC Library

September 1, 1989

U. S. DEPARTMENT OF COMMERCE NOAA
COASTAL SERVICES CENTER
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I. INTRODUCTION

The Bergen County Department of Planning and Economic Development commissioned in June, 1989, a New Jersey Department of Environmental Protection's Division of Coastal Resources funded (grant) study of the Hackensack River Corridor from Bogota to the Oradell Dam.

The intent of the study in conformance with the Coastal Grant Contract is to develop:

1. Conceptual Design for a Hackensack River Pathway System in Bergen County.
2. Conform to the Rules on Coastal Resources Development: This project will promote public access to the water and therefore with proper documentation and research achieve compliance with Coastal Policy.

A. PROJECT PURPOSE & GOALS

New Jersey's Hackensack River Corridor has natural features of great beauty that offer excellent views, despite its urban context. Increasingly, however, these areas are threatened.

The river marshes adjacent to Route 4 on the west side bank have been preserved as County park land - Hackensack River County Park (completion Spring 1990).

Several parcels along the River Corridor has gained permanent protection and are in County, Borough or State ownership. Many other natural features remain in private ownership, however, and are subject to varying developmental pressures.

The heart of Bergen County, at the Hackensack River, provides a vivid example of how rapid new development can encroach upon natural resources and historically significant landmarks. The river's physiography - of environmental, scenic and historic importance because of its north-south spine of serpentine marshes, creeks and rock escarpments and abundance of ponds and wooded slopes - remained relatively rural in scale until the industrial significance of the highway system resulted in massive urban sprawl.

From the earliest colonial settlement in 1639 up to the present, Bergen County has felt the impact of the New York Port area. The early settlements in the County were founded by Dutch farmers who immigrated northwesterly from New Amsterdam and Bergen Village (Jersey City). The valleys of the Hackensack, Passaic and Ramapo Rivers were natural entryways to the County. The early settlers established farms on large tracts of land in the fertile valleys and hillsides. Early centers of activity were located along the Hackensack River, with a major node being the Stueben Landing (adjacent to Old New Bridge Road).

In 1852, the old gristmill adjacent to the Stueben Landing was destroyed by fire. The river traffic peaked at this north trading area during the Civil War (1861-1865). In 1870 the Hackensack and New York Railroad laid its tracks along the west bank and water oriented business declined as a result of competition. As development prospered near the New York ports, the Corridor as a prosperous node had crested, only to be revived with residential development and the onset of major road developments linking the metropolitan areas.

The resulting developmental sprawl eventually engulfed the Hackensack Corridor and historic cores such as the Stueben and Bloomer House. The dependency on the automobile further shut the door to the river as development "backed in" to the Hackensack.

As a result, the environment has suffered and problems of erosion, siltation and flooding have increased. It is only through determined campaigns that the remaining unique areas may be saved. Bergen County Planning Departments have managed over the years to acquire several significant parcels. Direction from the County Executive and the Department of Planning and Economic Development share much of the credit for the existing open space planning.

The development pressures on open land and water oriented parcels will continue to threaten the remaining privately held natural areas and many environmentally sensitive lands. The sprawl of "development" stretches far beyond the County and is now "filling in" the smaller, bypassed pockets of vacant land within the Corridor itself. (See Bergen County Growth Capacity Figure next page.)

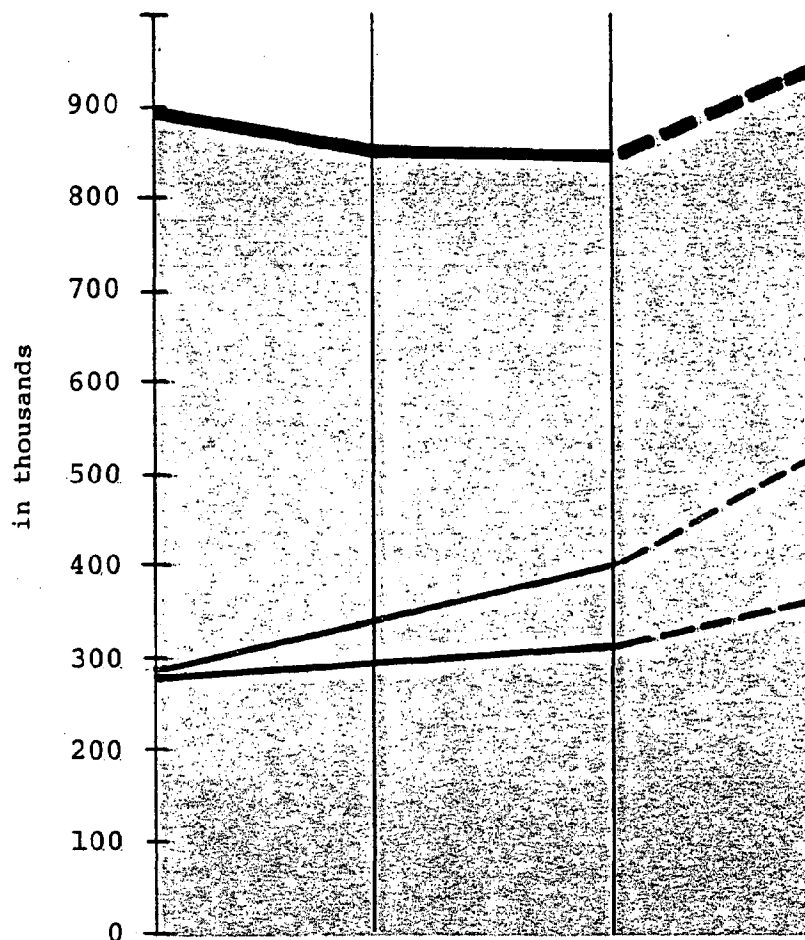
Without a program for preservation, conservation, acquisition, natural areas, and habitats, open space and scenic views could be destroyed by ongoing urban development.

For this reason, the Bergen County Department of Planning and Economic Development with a grant from the New Jersey Department, Division of Coastal Resources, asked consultants Environetics, Inc. to undertake a study to establish a program to identify parcels for acquisition.* preserving natural features, scenic views, open space, while facilitating a pathway system. In addition, to develop the tools necessary for their preservation.

* Bergen County Department of Planning & Economic Development, 1989.

Bergen County

	1970	1980	1987	2010	GROWTH 1987-2010
GROWTH CAPACITY					
POPULATION	897,148	845,385	830,467	940,430	109,963
HOUSING UNITS	283,311	306,774	321,580	367,115	45,535
EMPLOYMENT	292,587	340,296	401,924	522,875	120,951



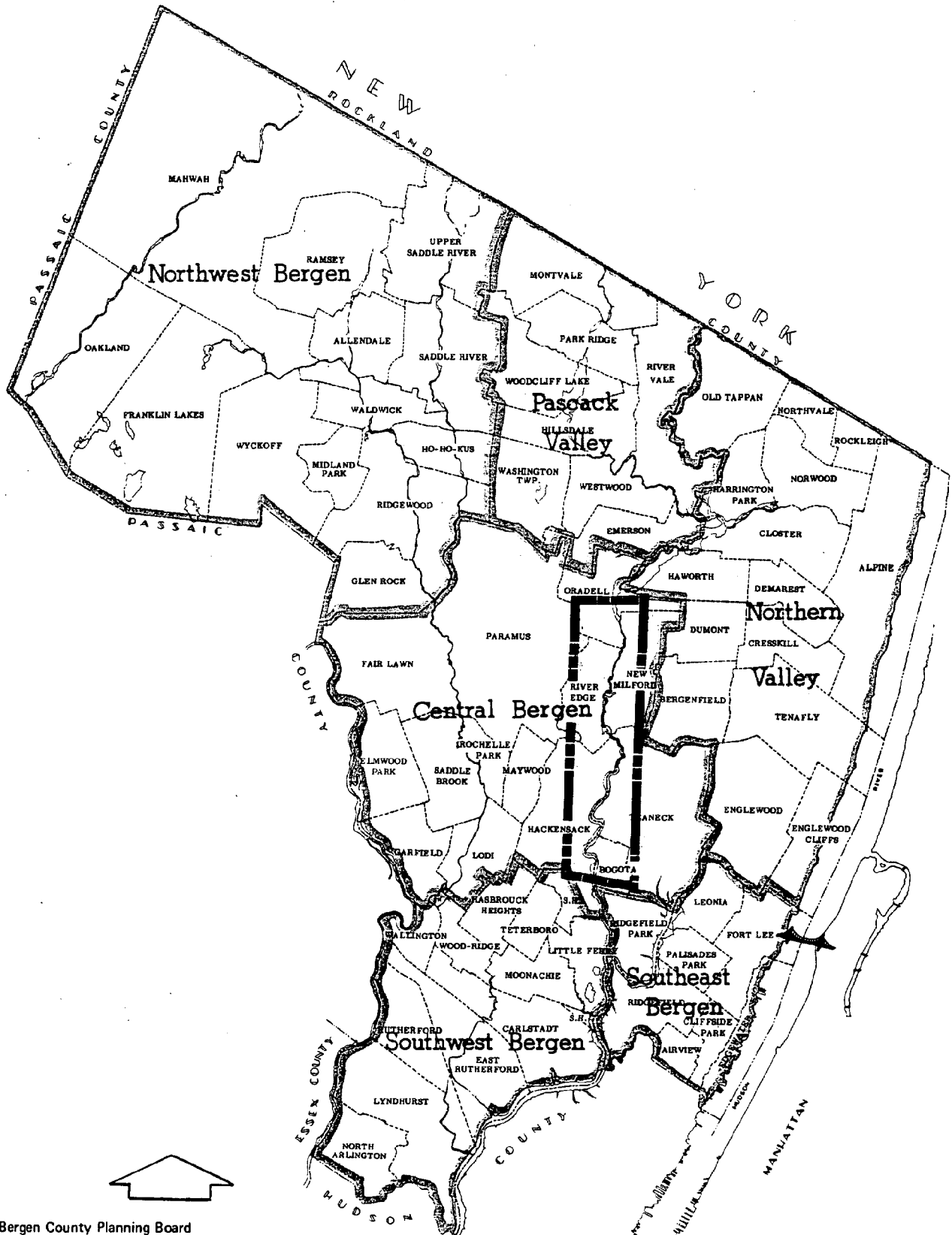
Actual County-wide growth 1970-87 compared with projected County-wide growth 1987-2010

	<u>1970-1987</u>	<u>1987-2010</u>
Employment	+109,337	+120,951
Homes	+ 38,269	+ 45,535
Population	- 66,681	+109,963

— POPULATION
 — HOUSING UNITS
 — EMPLOYMENT

B. PROJECT AREA

The project area stems from the Oradell Dam south to the Midtown Bridge in Bogota, and all property abutting the Hackensack River Corridor. See plan below.



C. METHODOLOGY

This report represents the identification step in a process focused on developing an approach and implementation program for preservation of open space in urban and dense residential areas under intense development pressure (only 6.8% open space left in Bergen County*, see Figure next page).

Recommendations concerning various parcels are accomplished in a hierarchy to accomplish the task with minimal demands on public funds.

The program is as follows:

1. The first step is to identify and analyze the significant and unique environmental features as defined in the New Jersey Rules on Coastal Resources and Development (NJAC, 7:E-1.1 et seq., Sheets 7-13).
2. Inventory natural and manmade factors along the shoreline in order to determine their distribution, scarcity, and sensitivity to change related to the proposed pathway system.
3. Identify and inventory aesthetic impacts of a pathway to:
 - a. User Aesthetics
 - b. Operational Impacts
 - c. Adjacent Land Use.
4. Meet with adjacent communities and private organizations in order to identify additional local needs or concerns.

The following boroughs and interested parties had met with Mr. Dana Hepler (Principal, Environetics, Inc.) and Mr. Don Clark (Director, Special Projects, Bergen County Department of Planning and Economic Development).

FDU

- o Dr. Stuart Fagan, FDU
- o Alice Olick, FDU
- o Michael Glass, FDU Counsel

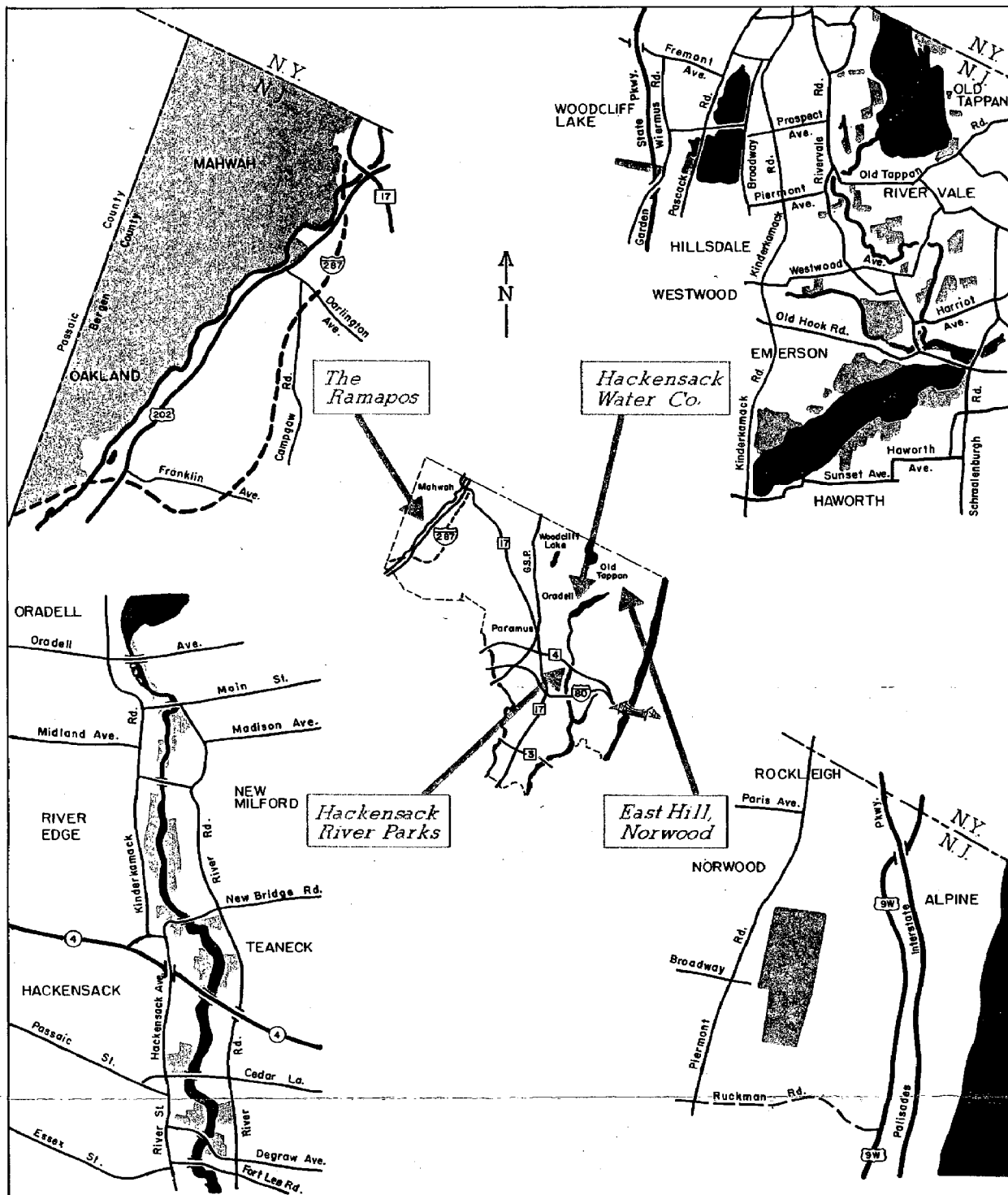
Bogota 8/10/89 (Without Mr. Hepler)

- o J. Rutch, Borough Administrator
- o R. Ferro, Councilman

New Milford 8/11/89

- o J. Macari, Borough Administrator
- o T. King, Councilman
- o S. LePage, Recreation Director

* Bergen County Department of Planning & Economic Development, 1989.



Bergen County 6.8% Open Space Left and Disappearing

Bergen County's Four
Major Open Space Priorities

COUNTY OF BERGEN
Department of Planning & Economic Development



Teaneck 8/14/89

o P. Bower, Deputy Mayor

Hackensack 8/14/89

o G. Duffy, Director Community Affairs

Oradell 8/14/89

o C. Hague, Mayor

River Edge 8/14/89

o A. Grillo, Borough Administrator

Von Stueben House 8/18/89

o Kevin Wright

Hackensack Water Company 8/18/89

5. A public hearing was held as required by the NJ DEP, Division of Coastal Resources to receive comments from interested citizens and/or agencies (copy of notice follows).



COUNTY OF BERGEN
DEPARTMENT OF PLANNING AND ECONOMIC DEVELOPMENT
Administration Building - Court Plaza South - 21 Main St. - Hackensack, N.J. 07601-7000
(201) 646-3130

William D. McDowell
County Executive

Chester P. Mattson
Director

MEETING NOTICE

The Bergen County Department of Planning and Economic Development will hold a public meeting on Tuesday, August 22 at 7 PM to review the draft concept plan for a Hackensack River pathway system. The draft concept plan will portray alternatives for a pathway within the Hackensack River corridor from the Hackensack-Bogota area north to Oradell. The draft concept plan will include the provision of paths, boardwalks, and foot bridges along the Hackensack River.

The meeting will be held in the Freeholder Meeting Room (Room 301) at the County Administration Building, Court Plaza South, 21 Main Street, Hackensack.

Funding for this study was provided by a grant from the New Jersey Department of Environmental Protection's Division of Coastal Resources.

6. Incorporate public comments into program and/or plans as required.

7. Conceptual Master Plan:

- o Produce a responsive pathway plan addressing the existing site conditions.
- o Identify significant areas of interest, cultural, historic, recreation and/or environmental importance or potential with regards to pathway system.
- o Define location of walking and/or biking trails, linking contiguous or out parcels.
- o Integrate pathway with existing green belts when possible. Produce sketches/sections for design alternatives at difficult transitions or parcels.

8. Property Acquisition:

The structuring of property acquisition patterns or program to facilitate the eventual establishment of a contiguous Hackensack River Corridor Pathway System within Bergen County.

- o Identify procedures and design functions that are essential to the pathway realizations.
- o Phasing of implementation to maximize user participation of pathway system as soon as possible. Difficult acquisitions or utilizations to be part of subsequent phases when possible.

II. INVENTORY AND ANALYSIS

A. LAND USE

The existing land use along the Hackensack Corridor is comprised of:

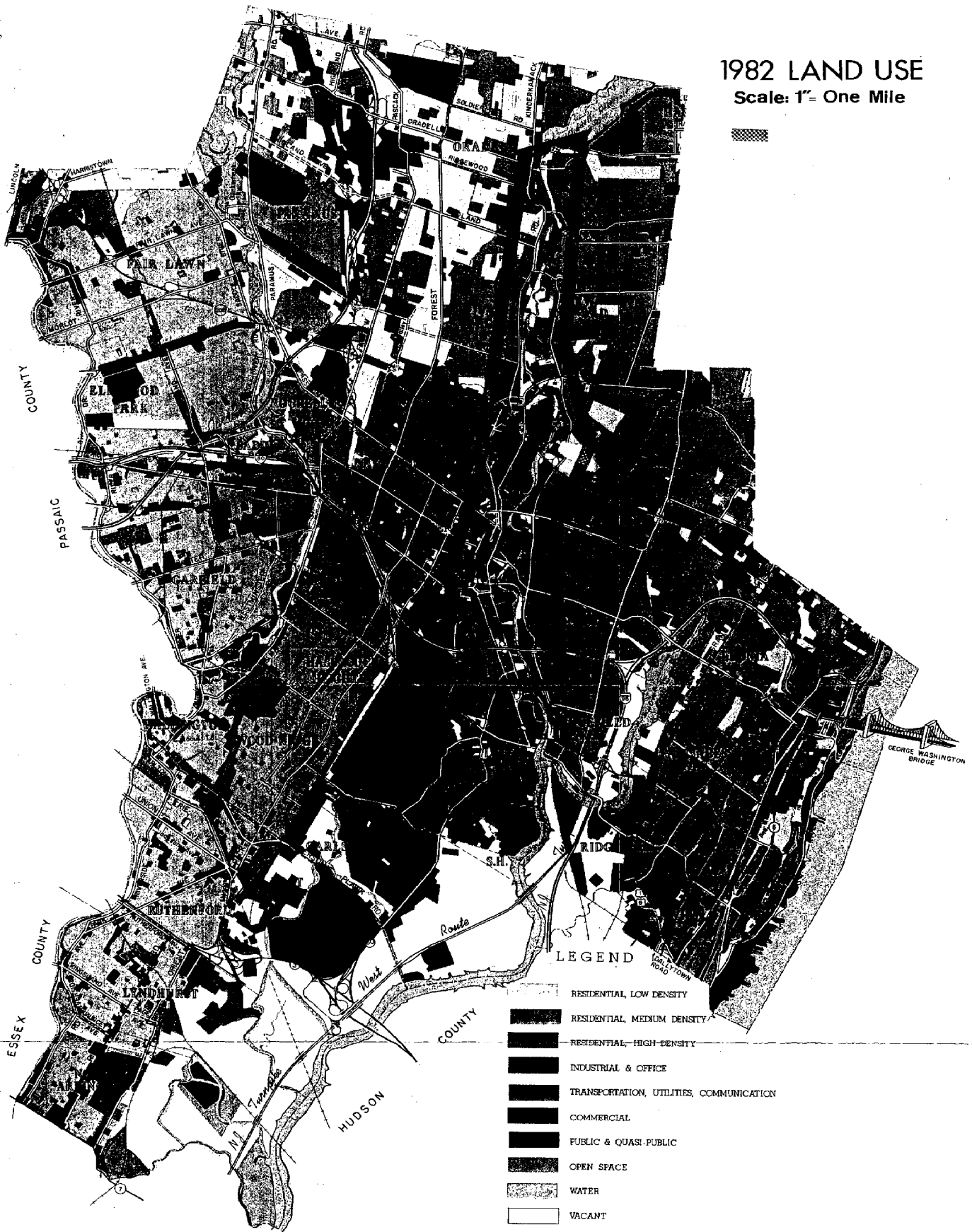
- o Industrial & Office
- o Commercial
- o Low-Medium Density Residential (1)
- o Public & Quasi Public Lands
- o Open Space
- o Vacant Land.

Below Cedar Lane the majority is industrial and commercial. The use to the north is more balanced between the remaining categories as mentioned above.

Refer to the 1982 Bergen County Land Use maps that follow.

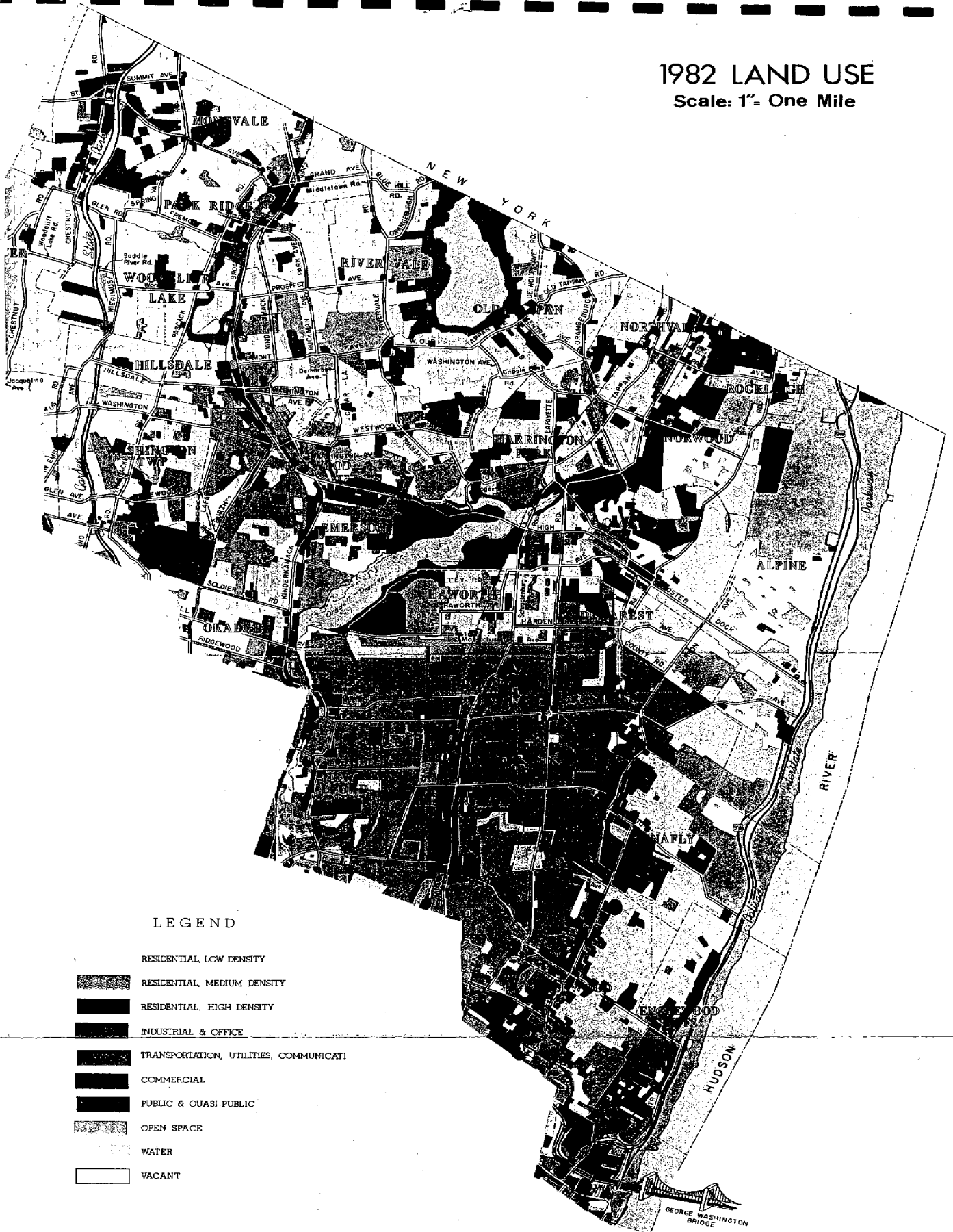
1982 LAND USE

Scale: 1" = One Mile



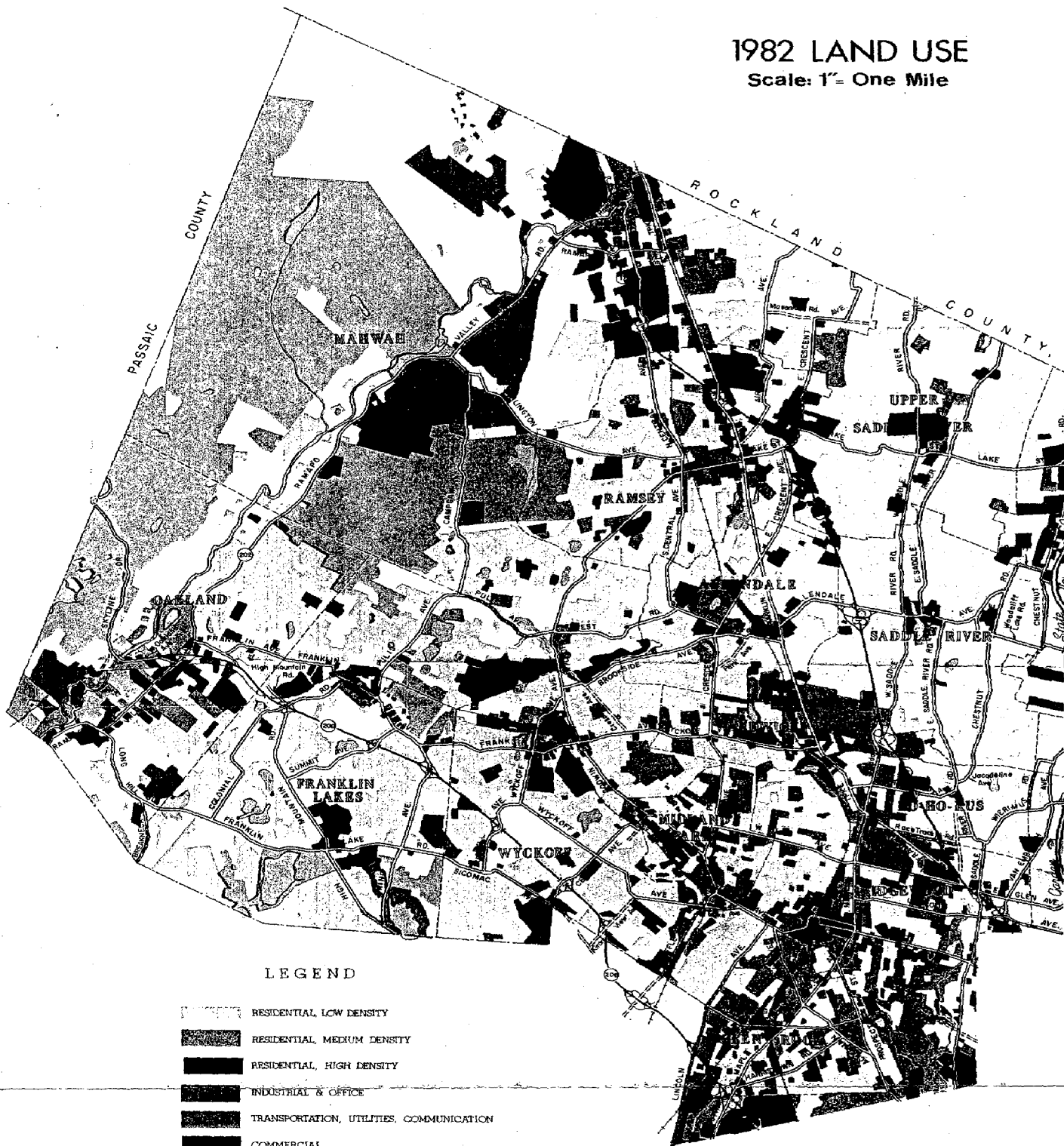
1982 LAND USE

Scale: 1" = One Mile













1982 LAND USE

Scale: 1" = One Mile



LEGEND

-  RESIDENTIAL, LOW DENSITY
-  RESIDENTIAL, MEDIUM DENSITY
-  RESIDENTIAL, HIGH DENSITY
-  INDUSTRIAL & OFFICE
-  TRANSPORTATION, UTILITIES, COMMUNICATION
-  COMMERCIAL
-  PUBLIC & QUASI-PUBLIC
-  OPEN SPACE
-  WATER
-  VACANT

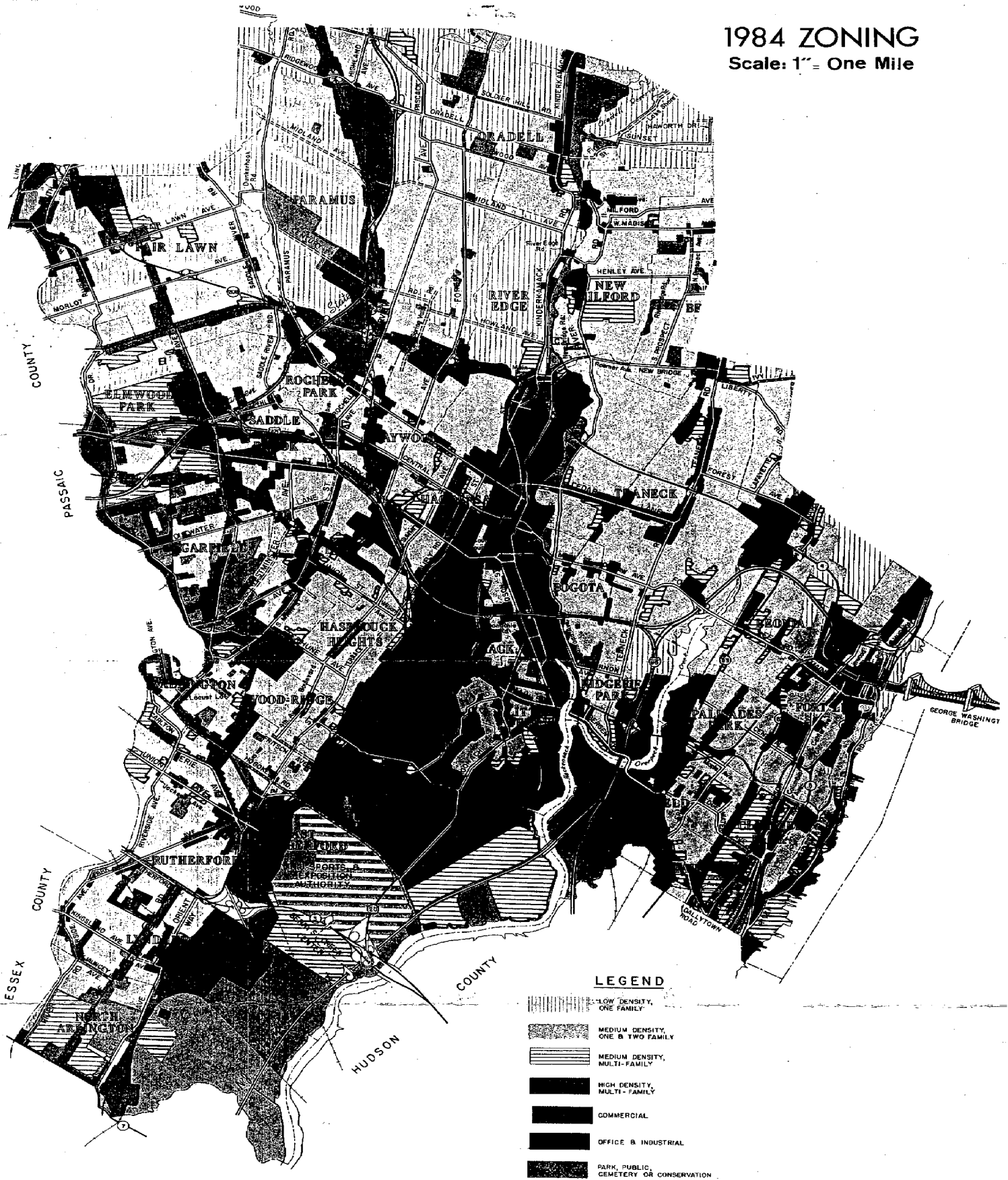
B. ZONING

It is apparent from the Zoning Maps (see following pages) that Hackensack River Industrial relationship has been important to the Bergen County community. For Open Space to be a factor, zoning changes or modifications thereof along the River Corridor are needed.

See 1984 Bergen County Zoning Maps that follow.

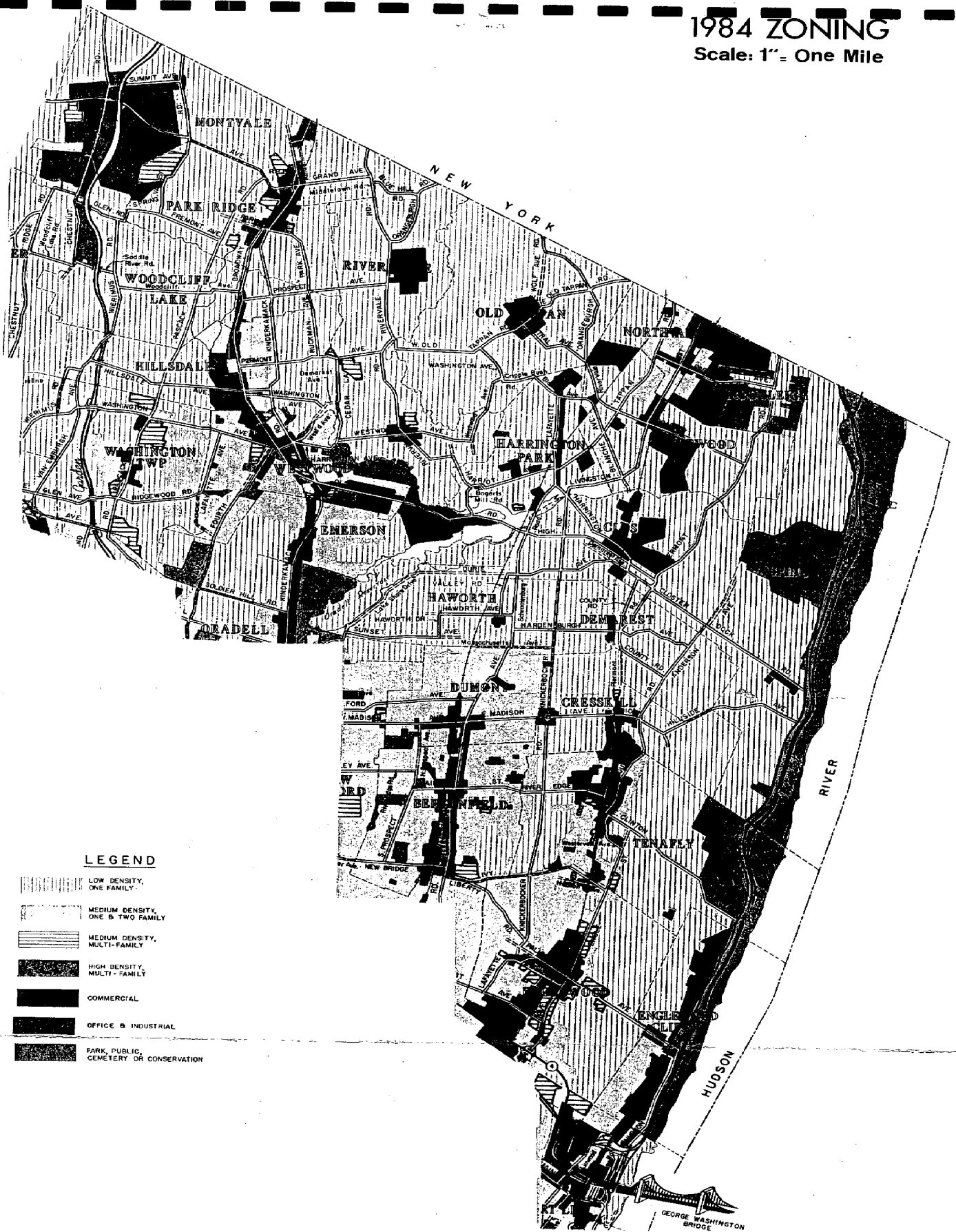
1984 ZONING

Scale: 1" = One Mile



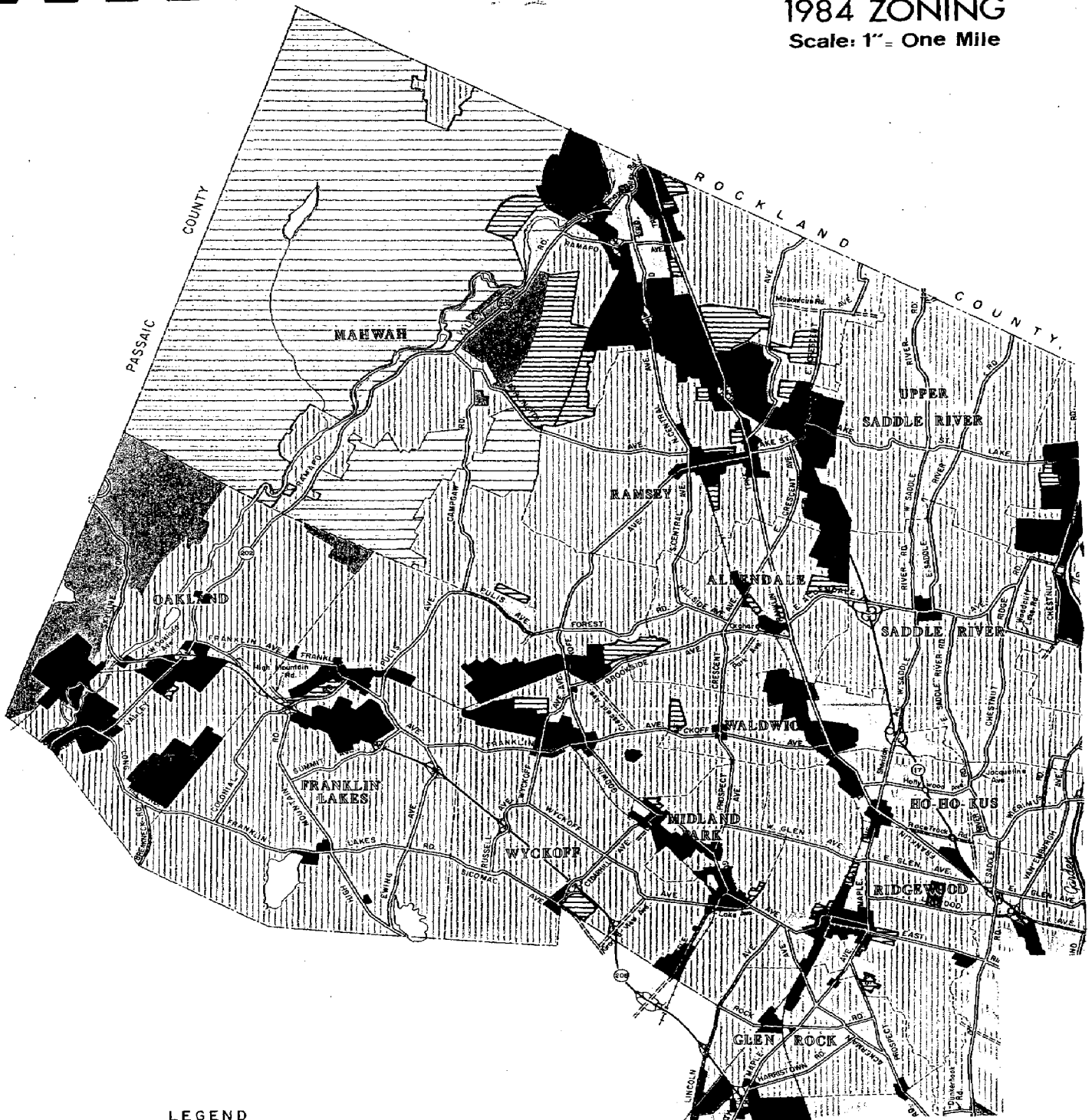
1984 ZONING

Scale: 1" = One Mile










1984 ZONING

Scale: 1" = One Mile



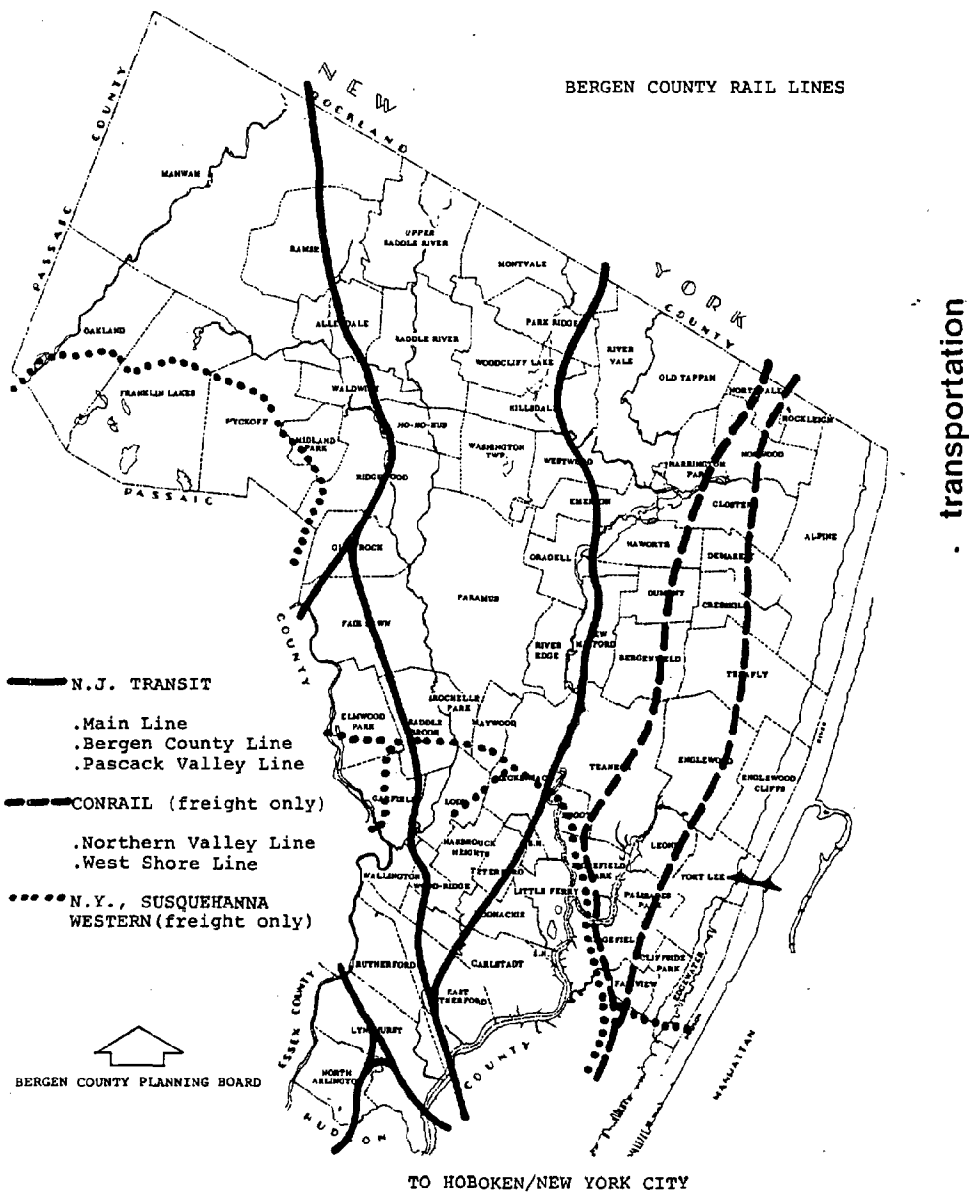
LEGEND

-  LOW DENSITY,
ONE FAMILY
-  MEDIUM DENSITY,
ONE & TWO FAMILY
-  MEDIUM DENSITY,
MULTI-FAMILY
-  HIGH DENSITY,
MULTI-FAMILY
-  COMMERCIAL
-  OFFICE & INDUSTRIAL
-  PARK, PUBLIC,
CEMETERY OR CONSERVATION

C. TRANSPORTATION

As Bergen County is the convergence area for major highways and mass transit systems from North and West Jersey, as well as Rockland and Passaic Counties, the subsequent race for land is at a premium.

See the map below for mass transit and freight lines. Note relationship to Hackensack Corridor.



D. VISUAL ANALYSIS/DESCRIPTION

1. View north from West Fort Lee Rd. to N.Y. Susquehanna and Western Railroad. Across river is Bergen Record plant with dock. To the left is the Ling Submarine Display.

On the east there are no opportunities for pathway as RAIA concrete plant with barges is in active use.

2. Shot south from Midtown Bridge:

- o At right possible opportunities for path system if conflict between paper plant utilizing river can be avoided.

3. View west from Hackensack over Midtown Bridge to Bogota:

- o Possible road crossing for path system from Fochini Park to link:

- a) Bogota Park system.
- b) West bank path system along Bergen Record plant.

- o Minor street and road improvements could facilitate improved visual.

4. View north from Midtown Bridge:

- o Private residents on east bank proposes linkage problems for pathway between Terhune and Bogota Park parcels.
- o Note mud flats and retaining wall adjacent to private property at Rivers Edge.
- o At left is Fochini Park.

5. View south showing transition from private residence to river's edge. Drainage swale in foreground.

6. Existing vacant parcel, looking west towards river:

- o Upland
- o Wetland
- o Water access
- o Natural succession
- o Diverse potential for wildlife.

Parcel has been approved by the Town for subdivision.
See text for Acquisition Alternatives as immediate action is required.

7. View to north along River St. as alternative pathway. See document for ROW discussion.

- 8-9. Panoramic view to north showing mud flats and adjacent private residences:

- o Note existing docks (functional at high tide only).
- o Note Teaneck-owned parcel and swim club to west.

10. North view from bank at Cedar Lane Bridge:
 - o Note clearance; subject is 6'-0".
 - o Note mud flats in foreground.
 - o Possible path location underneath bridge.
11. View south between FDU parking lot and Rivers Edge:
 - o Showing existing partially cleared path.
 - o Ideal for incorporation into path system.
 - o Note scale subject beyond.
12. View north along FDU dorms:
 - o Note distance between building and Waters Edge.
 - o Excessive side slopes at Rivers Edge.
- 13-14. View north of bridge:
 - o Note excessive side slopes.
 - o Back of Freeholder's parcel.
 - o FDU property beyond.
15. View north to Footbridge:
 - o Note no direct vehicular access from path.
 - o Note stairs to bridge.
16. View north of FDU parking lot and existing path under Route 4 Bridge:
 - o Note clearance vertically and horizontally.
 - o Minor path linkage problems regarding separation of "event" participants and patrons and public access thereto.
17. View north of Butler Pond:
 - o Note: existing residence fence beyond.
 - o Note: diverse wetland vegetation.
 - o Excellent habitat for wildlife.
 - o Excellent acquisition or easement parcel on private residential lot.
18. View south to Coles Brook from Old New Bridge:
 - o Note private property beyond (radio towers).
 - o Von Stueben Landing to right of Coles Brook.
 - o Brett Park to left of Hackensack River.
19. View north from Stueben Landing to Old New Bridge:
 - o Ideal footbridge.
 - o Closed to vehicular traffic; a possible design consideration.

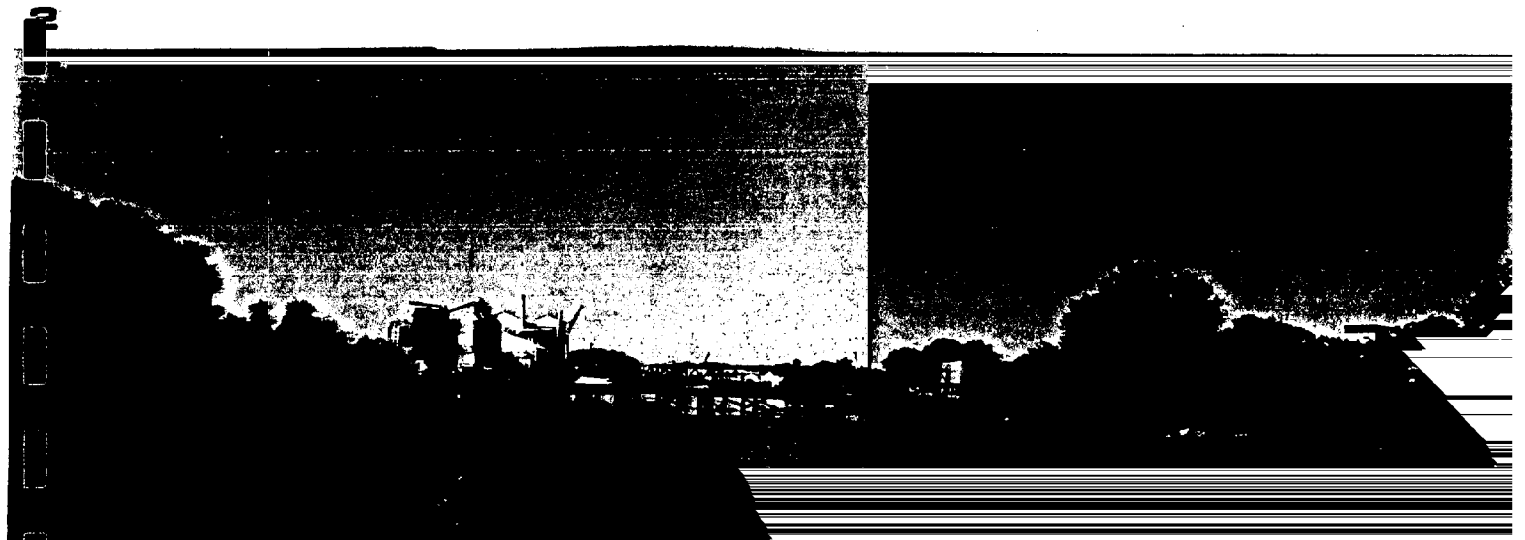
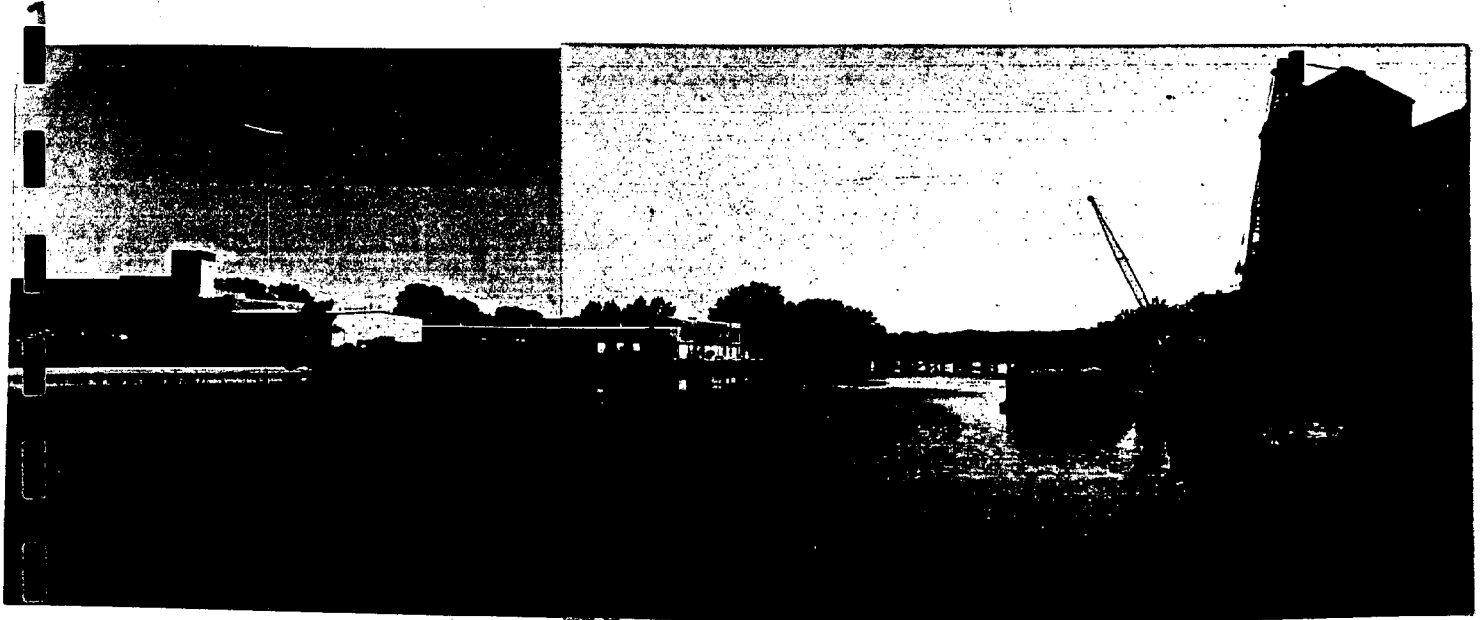
20. Von Stuben House.
21. View north between lot 18 and 19 of utility easement:
 - o Runs north to Stueben Avenue across New Bridge Road.
22. View north to New Bridge Abuttment:
 - o Note MHWL.
 - o Note clearance between bottom of structural steel and MHWL.
23. View north between apartment complex and Hackensack River showing possible acquisition parcel.
24. View northwest behind Demarest Bloomer House:
 - o Note Brook; great environmental potential.
 - o Needs clearing up.
 - o Access via easement adjacent to Bloomer House.
25. View to existing easement adjacent to Bloomer House.
26. View north at River Edge Avenue to Sports Depot:
 - o Link to easement would require sidewalk curb modification.
27. View south from municipal parking lot:
 - o Note rail to water distance and scope.
28. View south of privately owned parcel ideal for acquisition:
 - o Note: Field in succession.
 - o Diverse wildlife potential.
29. View north behind residential property.
 - o Linkage needed to hookup to borough parcel to north.
 - o Note railroad and utility easements.
30. View south of Hackensack from Oradell Avenue Bridge.
31. View from Oradell Avenue Bridge west to train station and field parcel owned by Hackensack Water Company.
32. View north to Oradell Dam from Oradell Avenue Bridge.

GENERAL:

Scenic corridors in our subject areas as defined by Bergen County Planning Department area:

1. Oradell Reservoir & Surrounds
2. Hackensack River County Park
3. River Edge open space at the Hackensack River.

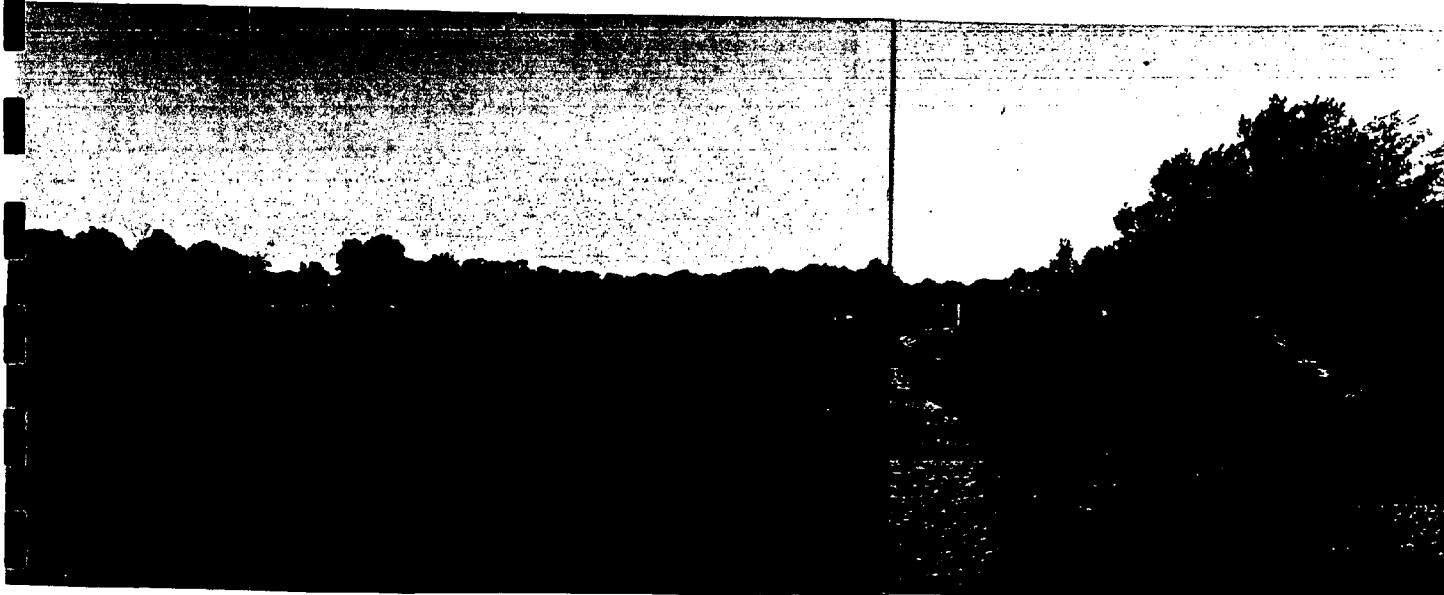
See following map and corridor descriptions. They are consistent with recommendations in the Conceptual Master Plan.



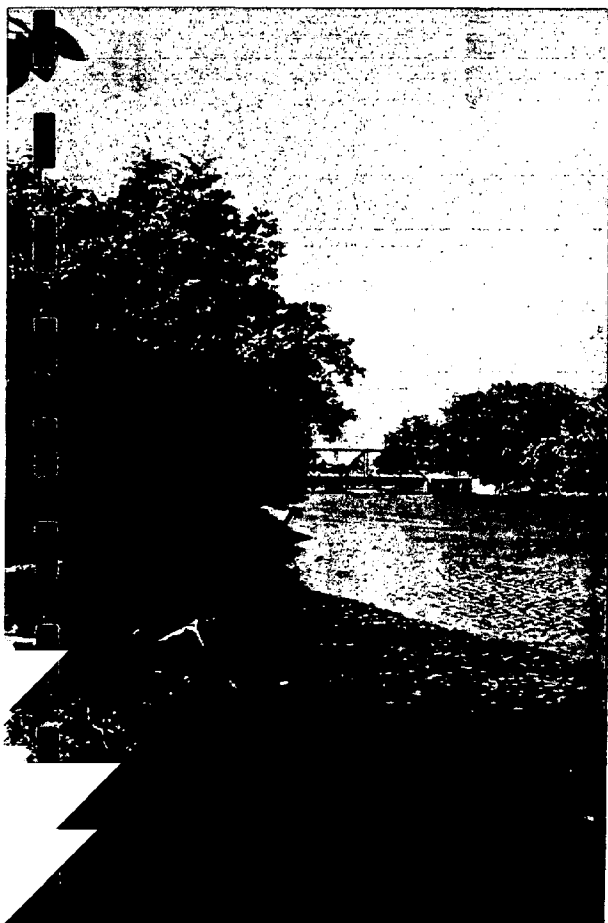
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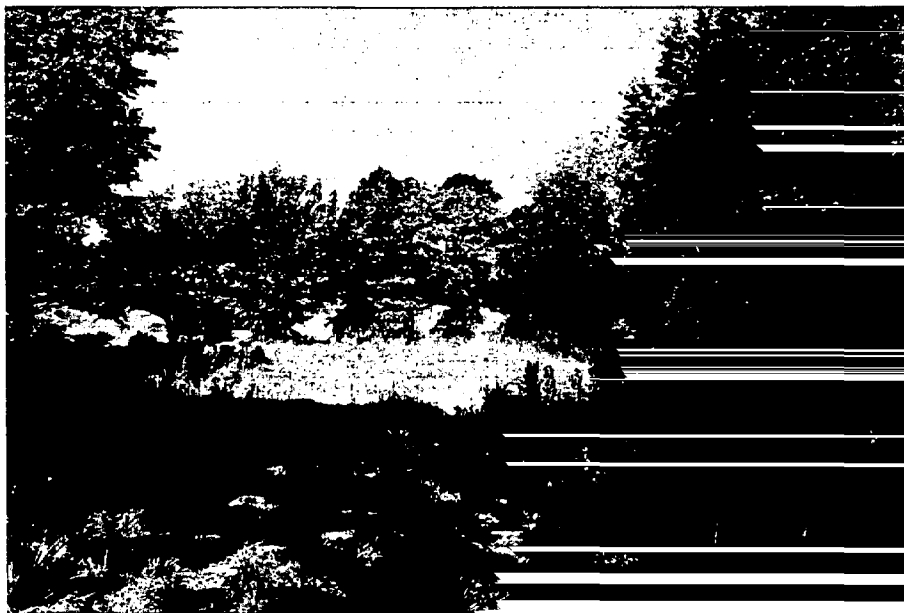
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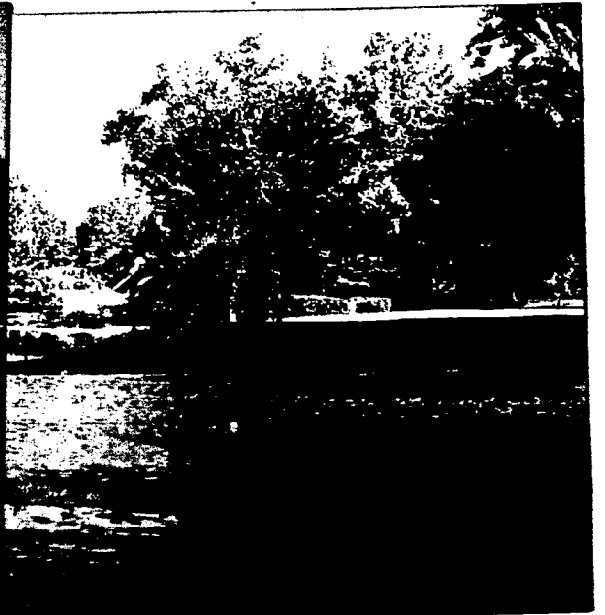
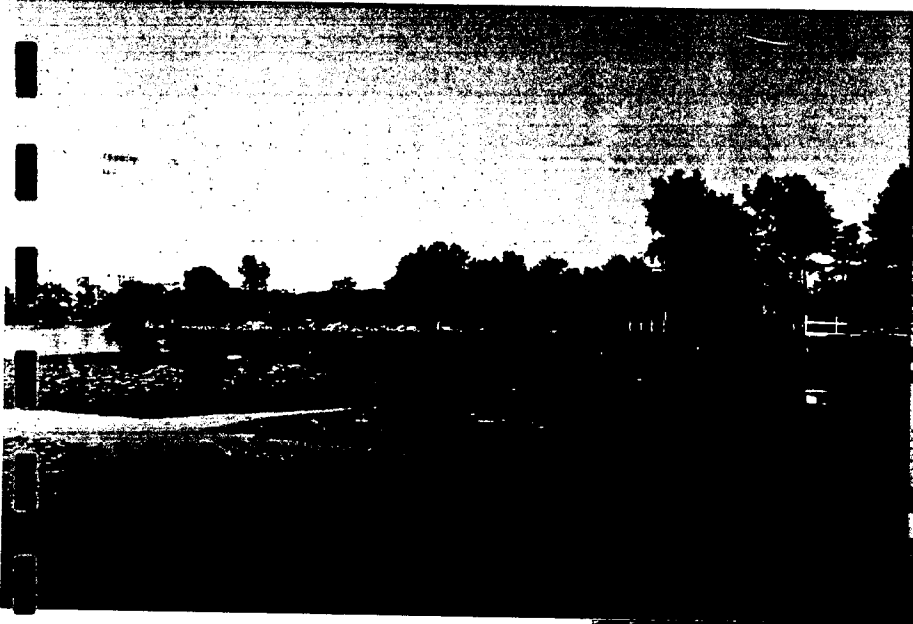


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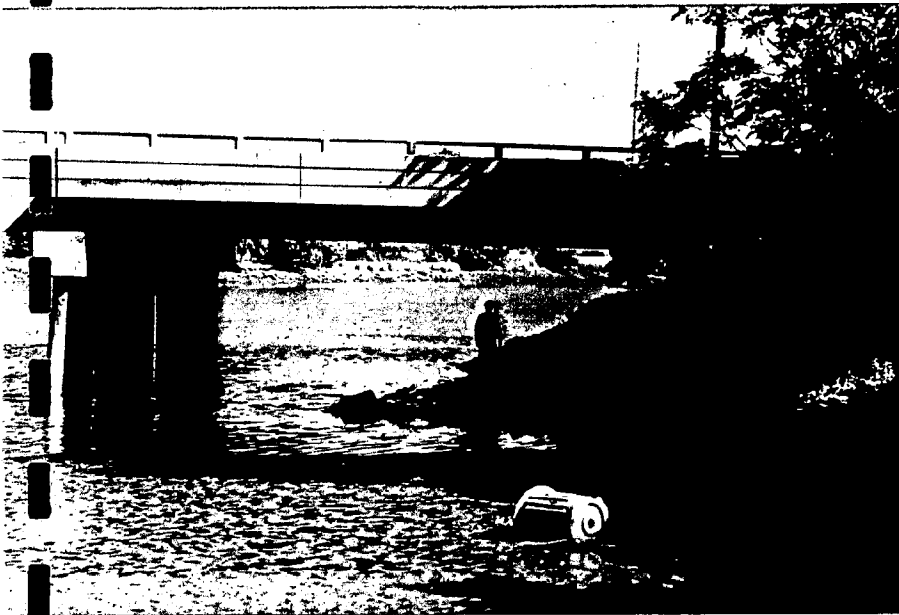


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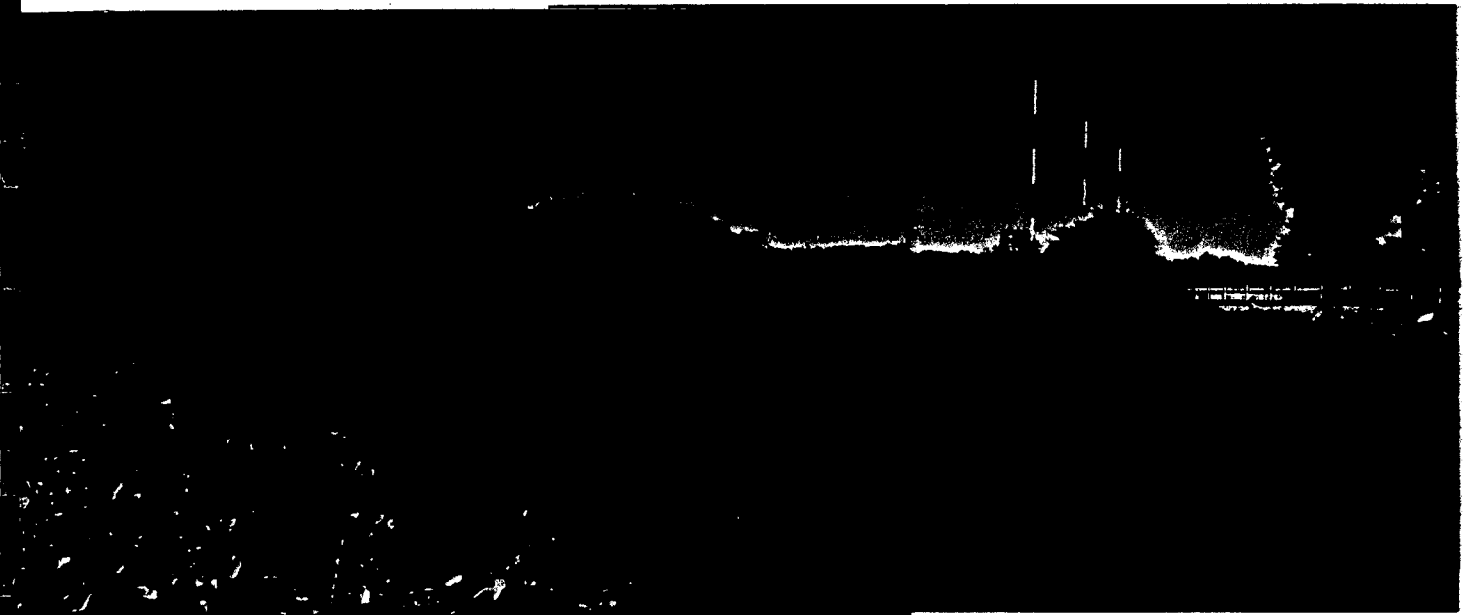
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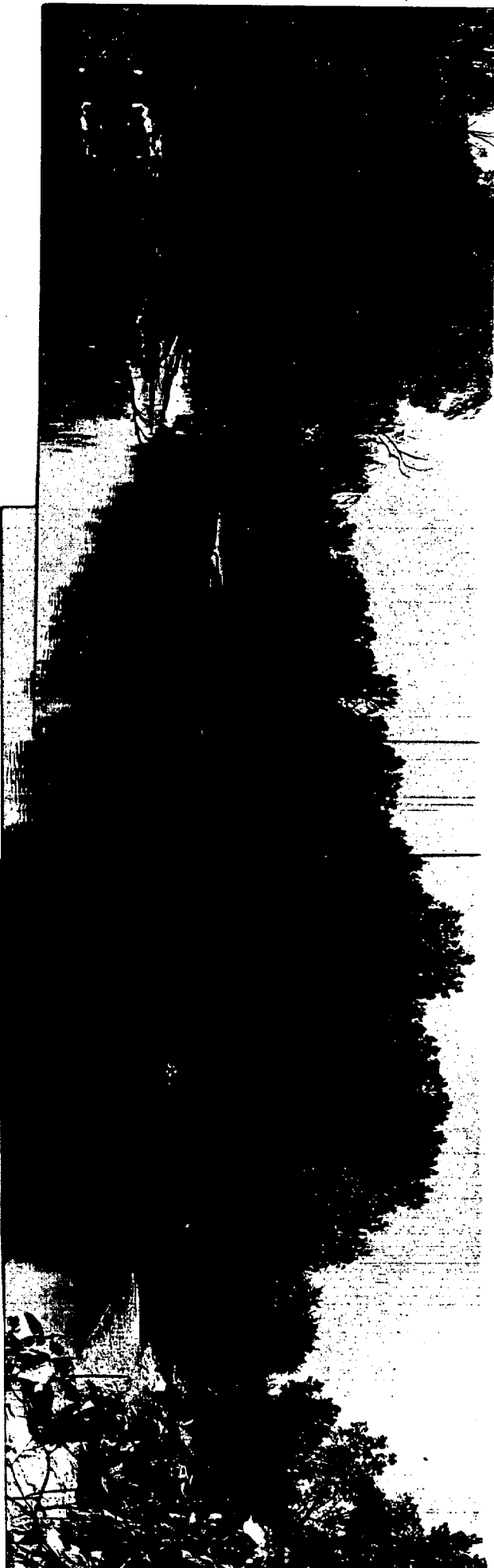


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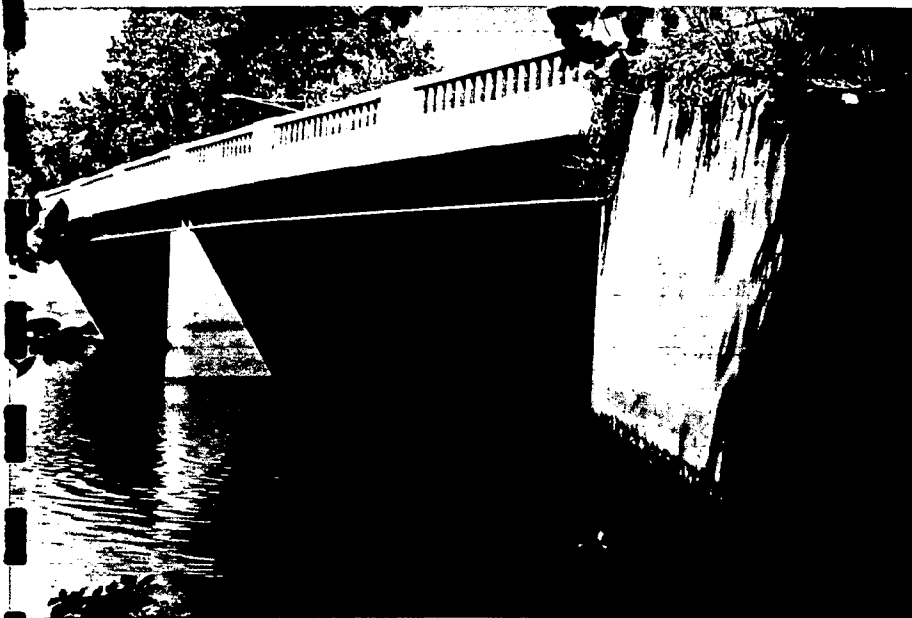
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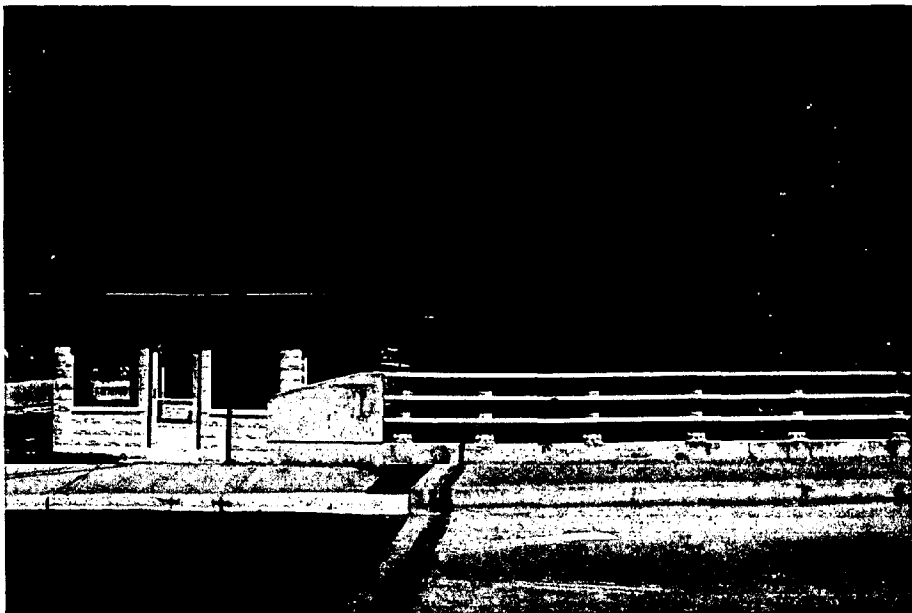
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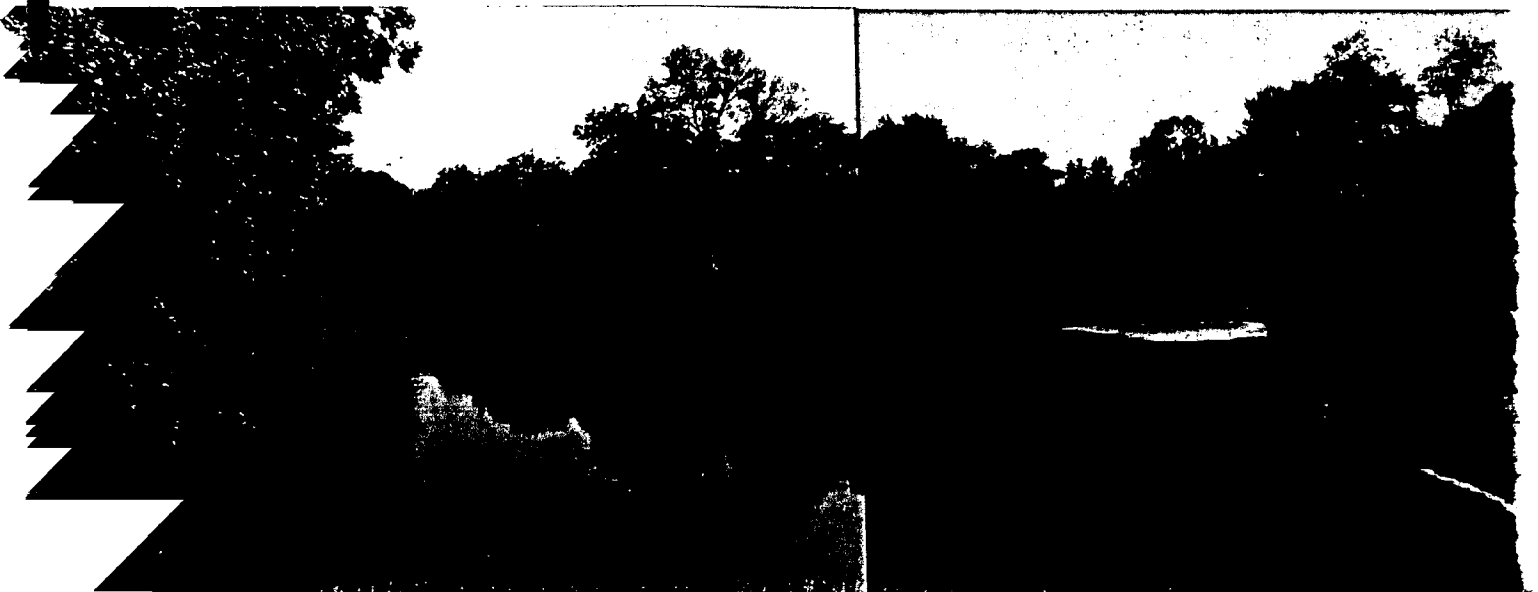
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31



32



SCENIC CORRIDORS

PASCACK VALLEY

- (aa) 14. Emerson
o 250 Foot Buffer Along the
Oradell Reservoir

15. Montvale
o Garden State Parkway
16. o Grand Avenue

17. Park Ridge
o Mill Brook

18. River Vale
o Poplar Road

19. Westwood
o Pascack Brook

20. Woodcliff Lake
o Woodale Park

NORTHERN VALLEY

21. o Palisades Interstate Park
22. o Ruckland Road if Built

- Demarest
23. o Entire Length of Tenakill Brook
24. o Demarest Nature Center

- Englewood Cliffs
25. o Palisades Interstate Park

- Harrington Park
26. o Dorotockey's Run
27. o Oradell Reservoir
28. o Hackensack River

- Haworth
(aa) 29. o Oradell Reservoir
(aa) 30. o Hackensack River

- Northvale
31. o Palisades Interstate Park

- (aa) North but in close proximity to the
River Corridor Study area and possibly
future greenway and blueway linkage.

- Old Tappan
32. o Dorotockey's Run
(aa) 33. o Hackensack River to
the Oradell Reservoir

- Rockleigh
34. o Historic District
35. o Rockleigh Road

NORTHWEST BERGEN

- Allendale
36. o Celery Farm
37. o Hillside Avenue
38. o Allendale Avenue

- Glen Rock
39. o Ho-Ho-Kus Brook
40. o Diamond Brook
41. o Confluence of
Ho-Ho-Kus Brook and
Saddle River

- Mahwah
42. Route 202, South of
Darlington Avenue
52. o Campgaw Road
o Ramapo Mountain and
Identified Trails

- Oakland
o Ramapo Mountain and
Identified Trails

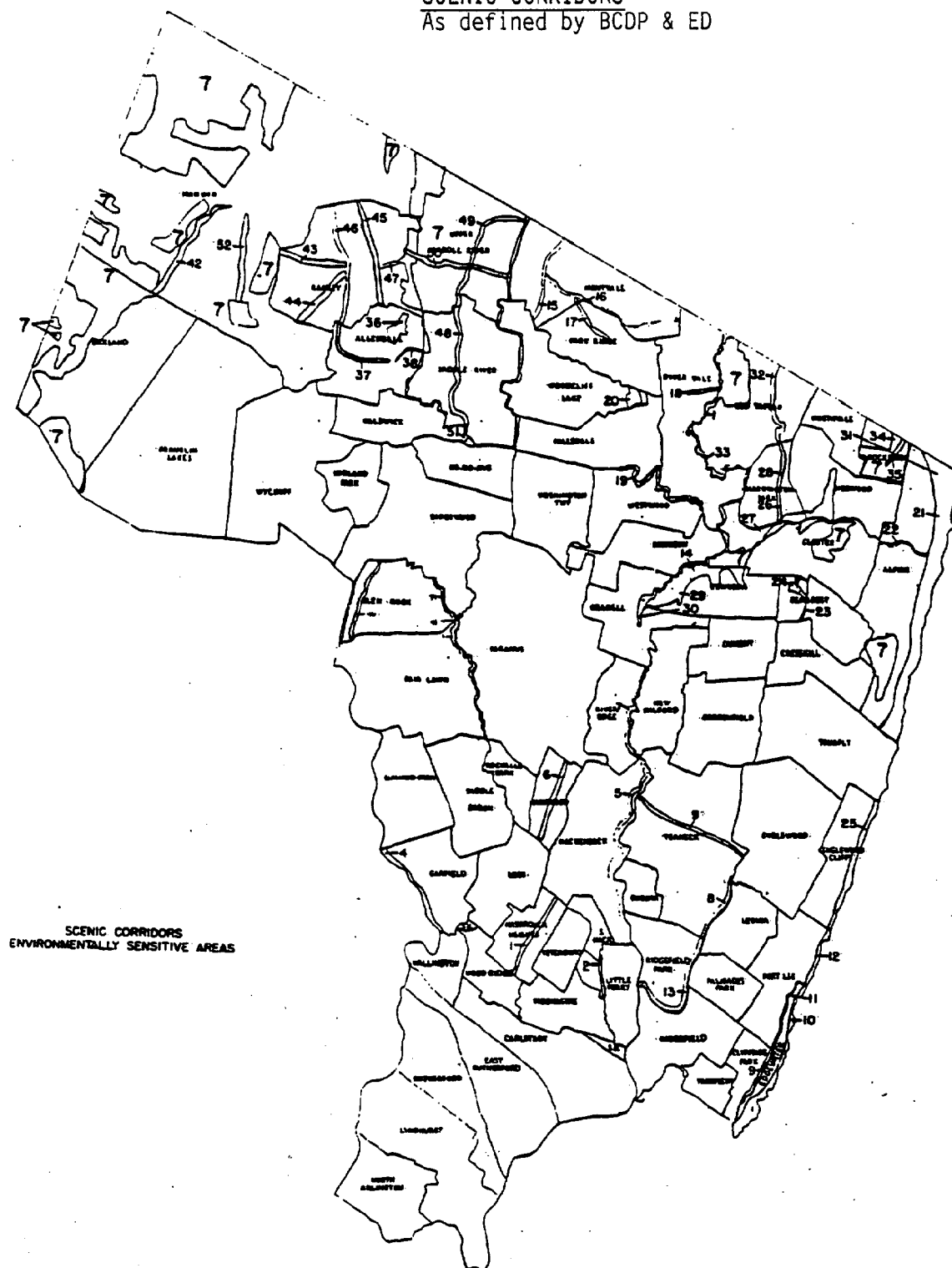
- Ramsey
43. o Darlington Avenue
44. o Wyckoff Avenue
45. o Franklin Turnpike
46. o Central Avenue
47. o Lake Street

- Saddle River
48. o Saddle River

- Upper Saddle River
49. o Saddle River Corridor
50. o Lake Street

- Waldwick
51. o Saddle River Corridor

As defined by BCDP & ED



E. SOILS AREAS DRAWINGS

Refer to the 36" x 42" drawings for detailed soil delineations and descriptions along the Hackensack Corridor. The majority excluding urban fill areas denote alluvial deposits, mud flats and organic material, ideal areas for conservation as building is costly and fill causes flood related problems.

In regards to a pathway, a portion of the system would require pier/boardwalk construction as frost heaving and soil instability combined with excessive slopes would make a conventional path system futile. Areas for boardwalk construction are noted on the Conceptual Master Plan.

F. WETLAND DELINEATION

It is apparent from the Wetland Delineation Maps that the Corridor is grossly overbuilt and infringements are frequent. This obviously highlights a major reason of this study; to acquire vacant and significant parcels for open space and, when practical, a pathway system.

All property containing wetlands (mostly tidal) should be pursued for acquisition. The feasibility for a pathway must be analyzed on a site by site basis, as in the Hackensack River County Park which utilizes a multitude of pervious paving materials and where conditions require boardwalk construction. Note the concept is to observe wetlands and enjoy open space and not conquer it or force incompatible uses upon it.

G. SPECIAL CONDITIONS MAP

Refer to the Conceptual Master Plan for Special Conditions areas.

Special Conditions types:

Views:



View Point



Potential Scenic View
to be enhanced.



View Corridor or Blight to be
blocked or screened.

CORRIDOR USE:



Activity Node: Boardwalk
Overlook, Resting Spot
w/Seating, etc.



Shelter/Weather Protection



Special Engineering Type-1



Special Engineering Type-2



Information/Signage



Historic Building/Site



Major Pathway



Boardwalk



Alternate Route

ACQUISITION

Type: (See Sheet #1 for key)

H. RULES ON COASTAL RESOURCES & DEVELOPMENT

Finfish Migratory Pathways

Finfish migratory pathways are located in the Hackensack River Corridor are as far north as the Oradell Dam. The following anadromous fish population have been collected and would be expected to increase*:
(in the project area):

- Yellow perch
- Alewife (River herring)
- Mummichog
- Alosa sapidissima (American shad)
- White perch
- Black crappie
- Carp
- American eel
- Blueback herring
- Goldfish
- Golden shiner
- White sucker
- Killifish
- Pumpkinseed
- Largemouth bass

* Collected by Division of Fish & Game & Shellfishers an/or others

The program for the proposed Hackensack river Corridor does not lend itself to severe developments and site perturbations. Even with the construction of boardwalks & an occasional gazebo, there will be minimal construction in the corridor to interfere with or adversely effect fish movement or migratory pathways.

Submerged Vegetation

The majority of the Hackensack River bed consists of mud flats which do not support submerged vegetation. Any existing submerged vegetation would be located at the banks of the river and would only be disturbed by the boardwalk pile of this project. The areas which require bank stabilization to facilitate a path system may require additional planting of grasses (See section on bank stabilization) & the removal of existing vegetation. The will be minimal destruction of submerged vegetation.

Intertidal & Subtidal Shallows

Although it is recognized any disturbance is generally discouraged in the shallows, certain side slope improvements are suggested where the flats abutt severe edge conditions with slopes in excess of 20%. Pathway system in this area may cause shallow disturbances due to regrading & or pile construction.

Filled Water's Edge

Although the corps of Engineers still regard the Hackensack River as navigable at this point, the river has not been dredged in some time* and the alluvial deposits have raised the basin such that

motorized transport above 4 is virtually nonexistent. This, combined with the large inter-tidal shallows, renders marina activity impractical without dredging. It is, however, conceivable to provide small canoe boating activity in the project during periods of high tide. The Hackensack River Canoe Club has several landing locations from Stubens down to points south. The pathways system could incorporate with design these activities.

Even though extensive intertidal shallows exist at low tide, it is believed the waterfront portion of this site can be developed with water dependant use, such as public waterfront recreation, including a canoe launch, wildlife observation, etc.

With respect to the rationale concerning canoe activity with the Corridor it is recommended that recreational boating (restricted to canoeing) be conditionally utilized. This is in conformance with the N.J.A.C. policy to allow and protect the public's right to use tidal waters for navigation, when environmental conditions permit.

* Fairleigh Dickenson University dredged approximately 485,000 cubic yards in project vicinity - 1970 (N.J.D.E.P.)

National Waters Edge - Floodplains

Development in these areas is prohibited unless it is a water dependent use. It is the policy of the N.J.A.C. to allow recreational uses and wildlife habitats as well as uses which require a water's edge location since these uses are more compatible with periodic flooding. The River Corridor must be analyzed on a site by site basis with actual topography to interpret the natural waters edge - this is beyond the scope of this report.

Wetlands

This project encompasses the banks of the Hackensack River. The pathway system shall serve to educate the public to the characteristics and importance of this type area on a first hand basis. The unique types of vegetation and the vital role that coastal wetlands play in the ecological balance will be on view and explained with the possibility of signage throughout the park.(similar to signage of the HRCF).

Also several sites are forested fresh water wetlands which will provide a more varied educational experience for the public.

Being aware that these are environmentally sensitive areas is being considered at every aspect of the parks development. Although trails may be installed throughout the Corridor, great care is being taken to route them so as not to interfere with established vegetation, etc.

The proposed Hackensack River Corridor Pathway System meets the criteria for development in a wetlands area as established in the Rules on Coastal Resources and Development by the New Jersey department of Environmental Protection.

The first item being its dependance on water access and being a water oriented facility. This Pathway System revolves around the environment of tidal wetlands for educational exposure to this habitat. It offers a Path system with waterviews and a canoe launch in a highly urbanized area. Also, giving the public access to a waterway and a waterview to participate in passive recreation is encouraged.

As the Pathway theme is a waterview and wetland's education center there is no feasible alternative on a non-wetland site, & defeats the purpose of a River Corridor Green Belt.

This facility will not in any way impair or alter the natural tidal circulation. The only structures that will be used in the wetland areas will be a gazebo which will be on piles so as to not interfere with any circulation and an occasional boardwalk system as necessary over wet portions of the path system.

Finally, there will be little or no alteration in the natural contour of the wetlands areas. The natural vegetation is to be labeled for educational matter and supplemented-not removed, impaired or altered in anyway.

Wetlands Buffer

Wetlands buffer are to be defined in all land 300' of wetlands which encompasses a majority of the Corridor. As the development on this site is very passive, it is believed that the requirements for a buffer area are minimal.

Historic & Archeological Resources

A study was done of this area for a previous planned project called "Lake Hackensack". This study was prepared for the Bergen County Planning Board and is entitled "Cultural Resources Reconnaissance: Proposed Lake Hackensack, Bergen county, New Jersey," dated November, 1976. Historical Archeological Resources shall be identified in this plan.

Endangered or threatened Wildlife or Vegetation Species Habitats

While no endangered or threatened wildlife has wildlife has actually been seen within the Corridor, it is a possible habitat for the bog turtle according to the information acquired from the New Jersey Natural Heritage program, N.J.D.E.P.

The Pathway System is meant to intrigue the wildlife with the use - not to destroy its habitat. Also there are large portions of the project area which are not being disturbed so the wildlife will have areas totally removed from the human activities.

Critical Wildlife Habitats

The Pathway vicinity & possible further land acquisitions shall be a sanctuary for critical wildlife in this area. Its purpose is to observe the various species which use a wetlands environment for breeding, migrating, etc. and to educate the public along these lines. The Pathway will allow visitors to photograph and observe the wildlife by the Hackensack River. There are no viable alternatives to this purpose than to provide an access for the nature viewers into the habitat of these species. The process should incorporate the trails into the habitat, not to interfere with it in any way.

To mitigate the interference in any way with the habits of the wildlife, the access by the public is limited by the trail system that is being provided. There are still major portions of wetlands area which is not being utilized where the wildlife can go unobserved and undisturbed.

The wildlife would be able to continue to live and breed in this park while being used for the education and enjoyment for the general public.

Public Open Space

The subject Hackensack River Corridor Pathway is comprised of county and public owned land which maybe utilized for wildlife refuge, wetlands educational center etc.

There is a significant deficit of open space and parks in this area of New Jersey which will be mitigated somewhat by the addition of this park. (See the plans for ownership designations)

Geodetic Control Reference Marks

The nearest found geodetic control reference mark was located on Route 4, 68' north of the entrance drive to the mall. (USGS mon. #4410). There is the possibility that some control is located on the site. If this is the case, these controls will not be disturbed. Since the site is a park, there is the freedom to alter the planned pathways or whatever is required to avoid any of these markers.

Medium Rivers, Streams & Creeks

The Hackensack River is included in this category. While the Corridor Pathway is located on the shores of the Hackensack River - variable but (minor) alterations or interferences to the river itself are involved.

Acceptability Conditions for Use

Boat Ramps: Boat ramps are a conditionally acceptable policy in the medium river areas if "there is a demonstrated need that cannot be met by existing facilities and that they cause minimal disturbance to

the intertidal or subaqueous vegetation."

Resort/Recreational Use Policies

Resort/recreation uses include a wide range of developments which are attracted to and/or are dependent upon locations along the coast, including parks and recreational areas such as natural areas, open space for passive recreation and linear paths. These qualifications describe the proposed amenities that will be made available at the Hackensack River Corridor Pathway System.

Marine Fish and Fisheries

Action along the Corridor shall interfere in a minimal way with natural functioning of marine fish, including the reproductive and migratory patterns. The river will not be altered from its current condition.

Water Quality

The Hackensack River Corridor Pathway is not a hazard to water quality wither the surface water of the Hackensack or to the groundwater. There is to be no changes to the river with the exception of boardwalks and an occasional gazebo. Also the plantings to be added will be regional, "no maintenance" selections so no affect on the ground water quality will occur.

Vegetation

Plantings may be done on a select basis throughout the Hackensack River Corridor Pathway System and will be reflective of the regional plantings. Plants which are near the river banks themselves will be specially selected for their tolerance to occasional saline flooding (for example American Holly, Black Cherry, Bayberry, Red Cedar etc.)

In the lower wetland area some of the species which would be provided are as follows:

Red Osier Dogwood - Cornus Stolonifera
Burning Bush
White Pine - Pinus Strobus

Planting will also be a vital part of the natural slope stabilization which is required in some areas of the Corridor. The particular materials for these areas shall be pending soil analysis as these banks may contain excessive levels of toxicity which will dictate plant material selection.

Any additional plantings will be native plants so as to enhance the vegetation of the pathway while providing a maintenance free establishment.

A partial list of new plantings follows along with its significance to the Corridor:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Significance</u>
Arrowhead	- <i>Sagittaria engelmannia</i>	Tubers eaten by waterfowl & mammals
Sweetflag	- <i>Acorus calamus</i>	Seeds eaten by waterfowl
Common elderberry	- <i>Sambucus candensis</i>	
Red osier dogwood	- <i>Cornus stolonifera</i>	Protected species in NJ- fruit, wood & foliage very important to songbirds, rabbits, raccoons, skunks & mice
Siberian Crabapple	- <i>Pyrus malus</i>	Fruit, seeds bark important to songbirds, opossums, rabbits, raccoons, skunks, squirrels & mice
Oak	- <i>Quercus coccinea</i>	Acorns bark & wood important to songbirds, muskrats, opossums, rabbits, raccoons, squirrels & mice
American Sweetgum	- <i>Liquidambar styraciflua</i>	
White Pine	- <i>Pinus strobus</i>	Buffer planting
Common Blue Violet	- <i>Viola cucullata</i>	Protected species in NJ seeds, foliage and plants very important to doves, songbirds and rabbits
Red chokeberry	- <i>Aronia arbutifolia</i>	Good emergency food for birds
Yarrow	- <i>Achilla millefolium</i>	Leaves important to rabbit
Marsh Marigold	- <i>Caltha palustris</i>	Protected species no value to wildlife
Honey-suckle	- <i>Lonicera tatarica</i>	Fruit important to

Public Access to Waterfront

The Corridor is for the most part blocked from view by the surrounding developments and its only access is through the public property. This will unavoidably remain. However, the park's location will be announced with signage at significant locations and at the HRCP (Hackensack River County Park) promenade area extending to the mall's parking facilities. The Corridor entrance signage will be highly visible on Route 4 and from the parking area. The sign will be a rustic design with graphic to depict wetlands characteristics. It is to be open to the general public for educational and passive recreational purposes. The path system provides access to the maximum practical extent, direct visual and physical interaction with the riverfront.

Parking for this site is to be provided at the adjacent properties and at the existing parking structures. Parking for school buses, which will be prevalent during class trips to the educational aspects of the park, will also be provided, at existing parks.

The Hackensack River Corridor Pathway is a planned link to a horizontal network of open space in Bergen county which is scheduled to be linked by jogging/bicycle paths. The goal is to provide a continuous access along the waterfront as well as a system of waterfront parks, open areas, and preserved wildlife habitats.

Scenic Resources and Design

The planned coastal development (pathway) of the Corridor is visually compatible with its environment. The proposed gazebos/overlooks and pathway will be of a naturalistic nature to blend in with the surroundings while enhancing the resources for the general public.

Wet Soils and High Permeability Moist Soils

No structures other than a few gazebos or boardwalks will be utilized at this site. Soil borings shall be taken at prescribed locations as to be able to employ any engineering techniques which will become necessary to ensure the stability of these structures. No drainage or utility pipes are to be installed in the Corridor.

Flood Prone Areas

This Corridor is providing public open space, a sanctuary for wildlife, wetlands species & wildlife observation. Also incorporated are areas which are to be utilized for passive observation & recreation in the river corridor setting. All of these uses meet and are encouraged by the Coastal Resource Commission for the areas which are classified flood prone.

Inventory

The wildlife and plant inventory includes species that were observed on the site and potential species expected to be on the site after analysis of the region and habitat. Information that was obtained from the James A. McFull Wildlife Center, the New Jersey Natural Heritage Program and the New Jersey Department of Fish and Game has also been incorporated. An asterisk (*) denotes those species which were actually observed on the site.

Mammals:

<u>Common Name</u>	<u>Scientific Name</u>
Raccoon*	Procyon lotor
Flying Squirrel	
Eastern Chipmunk	
Eastern Cottontail	Sylvilagus transitionalis
Muskrat*	Ondatra zibethica
Red Fox	Vulpes fulva
Opossum*	Dielphis Virginiana
Grey Squirrel*	Sciurus carolinensis
Eastern Wood Rat*	Neotoma floridana
Skunk	Mephitis mephitis
Weasel	Mustela erminea
Woodchuck	Marmota monex
Little Brown Bat	Myotis lucifugus
Red Bat	Lasiurus borealis
Big Brown Bat	Eptesicus fuscus
Eastern Pipistrel	Pipistrellus subflavus
Short-tail Shrew	Blarina brevicauda
Least Shrew	Cryptotis parva
White Footed Mouse	Peromyscus leucopus
Star Nosed Mole	Condylura cristata
Eastern Mole	Condylura cristata
Norway Rat	Rattus norvegicus

Birds:

Great Blue Heron*	Herring Gull
Green Heron	Ring-billed Gull
Snowy Egret*	Rock Dove
American Bittern	Mourning Dove
Canadian Goose*	Belted Kingfisher
Mallard	Downy Woodpecker
Black Duck	Blue Jay
Green-winged Teal	Common Crow
Wood Duck	Northern Mockingbird
Bufflehead	Robin*

Sharp-shinned Hawk
Red-tailed Hawk
Osprey
Clapper Rail
Killdeer
English Sparrow
Red-winged Blackbird
Northern Oriole
Common Grackle
Brown-headed Cowbird

European Starling*
Cardinal
Screech Owl
Northern Harrier
American Kestrel
House Finch
American Goldfinch
Dark-eyed Junco
Song Sparrow
Lesser Jellowlegs

Reptiles & Amphibians:

Common Name:

Scientific Name:

Red-backed Salamander
Northern Dekay Snake
Northern Diamondback Terrapin
Eastern Garter Snake
American Toad
Eastern Box Turtle
Bog Turtle**
Leopard Frog
Northern Water Snake
Green Frog
Bull Frog
Spring Peeper
Snapping Turtle
Painted Turtle
Spotted Turtle
Mud Turtle
Box Turtle

Thamnophis sirtalis sirtalis

Clemmys Muhlenbergii
Rana pipens pipens
Natrix sipedon sipedon
Rana clamitans melanota
Rana catesbeiana
Hyla crudifer
Chelydra serpentina
Chrysemys picta picta
Clemmys guttata
Kinosternon subrubrum subrubrum
Terrapene carolina carolina

** The Bog Turtle is listed by the State of New Jersey as endangered and is under consideration for a federal protection status.

Fish:

Yellow perch
Goldfish
Goldenshiner
White Sucker
Killifish
Pumpkinseed
Largemouth Bass
Mullet

Blueback Herring
Mummichog
American Shad
White Perch
Black Crappie
Carp
American Eel
River Herring

Mollusks & Crustaceans:

Various species of clams
Blue-clawed crab

Vegetation Inventory

Common Name

Scientific Name

Aquatic Plants:

- * Arrowhead
- Sweetflag
- * Broad-leaved cattail

Sagittaria engelmannia
Acorus calamus
Typha latifolia

Sedge Plants:

- * Bull Sedge
- Beaked sedge
- Yellow nutsedge

Carex lasiocarpa
Carex rostrata
Cyperus esculentus

Reed Plants:

- * Common Reed, Giant Reed
- Bur-reed

Phragmites Communis
Sparganium eurycarpum

Grass Plants:

- Fall Panicum
- Green Foxtail

Panicum dichotomiflorum
Setaria viridis

Fern Plants:

- Glade Fern

Anthyrium pycnocarpon

Herbaceous Plants:

- Tarragon
- Minute Duckweed
- Plantain
- Shepards Purse
- Common lambsquarters
- * Ragweed
- Crown vetch
- Smallseed Falseflax
- Yarrow
- Mouseer chickweed

Artemesia dracunculus
Lemna perpusilla
Plantago lanceolato
Capsella bura-pastoris
Chenopodium album
Ambrosia common
Plantago major
Camelina sativa
Achilla millefolium
Cerastium vulatum

Lily Plant:

- Wild Garlic

Allium vineale

Vine Plant:

- Catbrier
- Poison Ivy

Smilax pseudo-china
Toxicodendron sp.

Srubs:

- * Button Bush
- Poison Sumac (shrub)

Cephalanthus occidentalis
Toxicondendron sp.

Flowering Plants:

- * California Goldenrod
- Fall Dandelion
- Pigweed
- Yellow Rocket

Solidago californica
Leontodon autumnalis
Anaranthus retroflexus
Barbarea verna

Trees:

- * Swamp Maple
- Maple
- Aspen
- Black Cherry
- * Oak
- * Black Oak
- * Tree-of-heaven
- * Staghorn Sumac
- * River Birch
- * Black Willow
- * American Sweetgum
- * Bloodtwig Dogwood
- * Green Ash
- * White Mulberry
- * American Elm
- * Eastern poplar
- * Black Locust

Acer rubrum
Acer saccharum
Populus grandidentata
Prunus serotina
Quercus coccinea

Ailanthus altissima
Rhus typhina
Betula nigra
Salix nigra
Liquidambar styraciflua
Cornus sanguinea
Fraxinus pensylvanica lanceolata
Morus alba
Ulmus americana
Populus deltoides
Robinia pseudoacacia

END

I. IMPORTANCE OF ENVIRONMENTALLY SENSITIVE AREAS

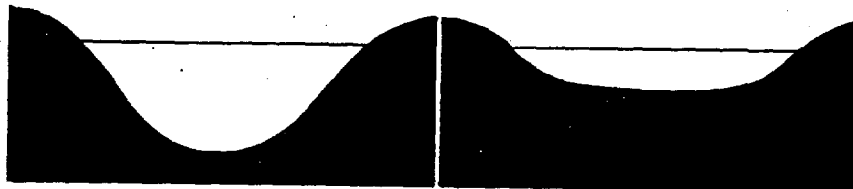
Our attitudes toward land have been changing during the past decade. Previously, land was treated as a commodity to be bought, bartered, or sold through the real estate market. Land that was not flat and dry was in the way. Where land was cheap, wetlands and hills were left alone; where land was expensive, it was made buildable by flattening, draining and filling it.

Experience, however, has taught us that the real estate market cannot handle all allocation considerations.

The evidence is obvious as the overdevelopment and urbanization in the flood plain has resulted in increased sedimentation of stream beds, increased flood levels and interference with groundwater recharge, of contributing streams and to the Hackensack River itself. Most stream patterns remain relatively stable, with only gradual alteration of stream channels. However, increased sedimentation of a stream bed or river bed can force the river to seek a new channel, resulting in additional erosion and problems from sedimentation. The existing situation of the Hackensack Corridor is obvious - extensive mud flats. Although partially contributed by tidal action, sedimentation is a major problem. See stream properties below:

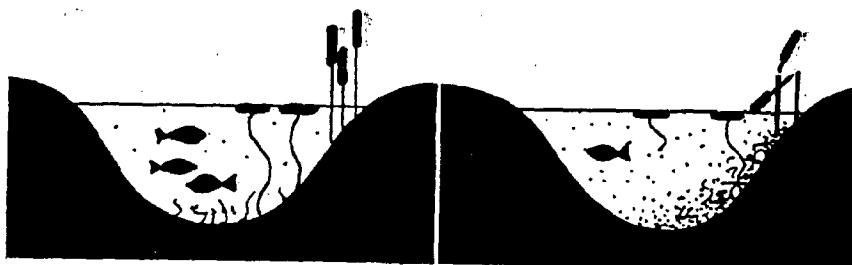
STREAM PROPERTIES

Deep stream bed usually means high velocity and scoured rock bottom



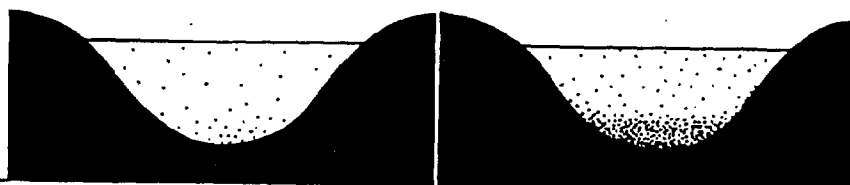
Shallow stream bed usually means low velocity and less scoured, sediment prone bottom

Under natural conditions use of nutrients, oxygen and other stream resources by wildlife, plant life and decomposing matter is at an equilibrium



With increased runoff, organic matter in the water increases and uses much of the total oxygen in decomposing - fish decline, algae proliferates

Under natural conditions a stream can efficiently transport the sediment deposited by natural erosion and runoff

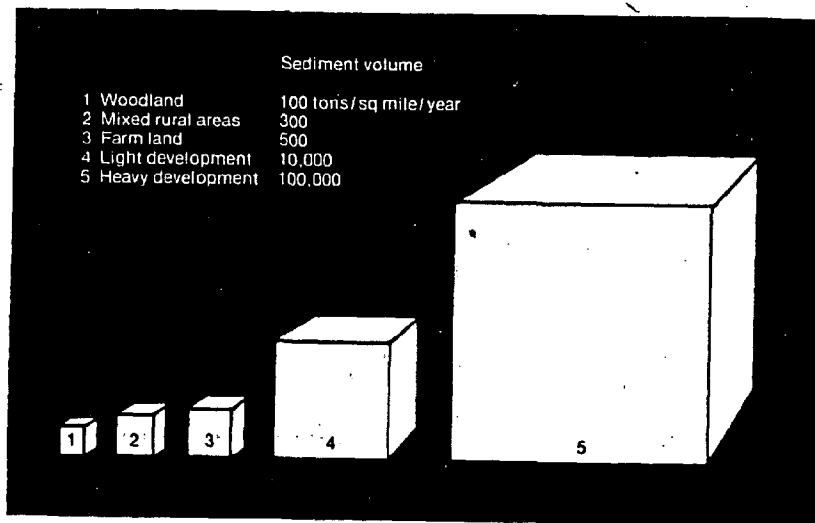


When increased runoff increases the sediment load above the natural capacity of the stream, the sediment settles out and is deposited on the stream bottom

Heavy sedimentation of stream beds by improper land use or development near the Hackensack created heavy sedimentation, and special problems by choking the channels used by boats, canoes and ships. Sedimentation, especially in this coastal/tidal area, also destroys spawning and feeding grounds for aquatic life, in particular for many species of game and food fish, as well as for shellfish such as oysters, mussels and clams.

The real cause of sedimentation lies in the watershed, although development up river and on the Hackensack Corridor can have significant negative impact on erosion and thus contributing to sedimentation.

See the following diagram for land use and associated sediment contributions:



VOLUME OF SEDIMENT ERODED FROM LANDS OF DIFFERENT USES

(1)

The aggressive acquisition policy of Bergen County which prompted this study has also acknowledged the importance of defining a buffer zone on parcels now developed or not feasible for outright acquisition.

Although in many places a 50' buffer is required, such as the NJ Transit site and the Borough of River Edge Compost site, a "floating buffer" is required.

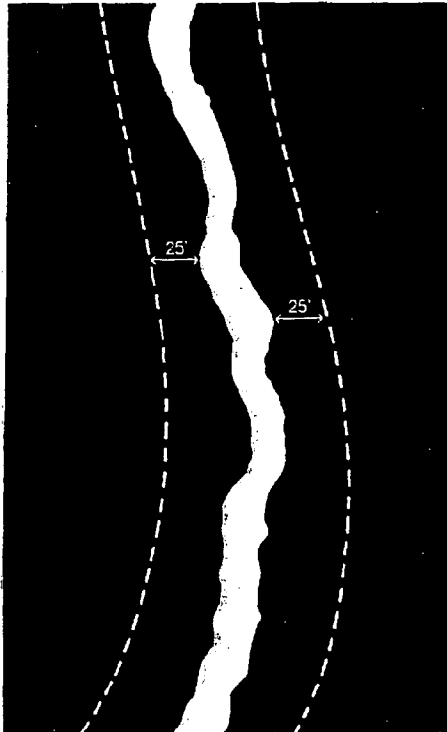
A floating buffer varies in width according to the location of other resource areas. This would include, for example, consideration of adjacent sloping areas, poorly drained soils, woodlands, wetlands, and areas with high water tables.

Width shall be determined by investigation:

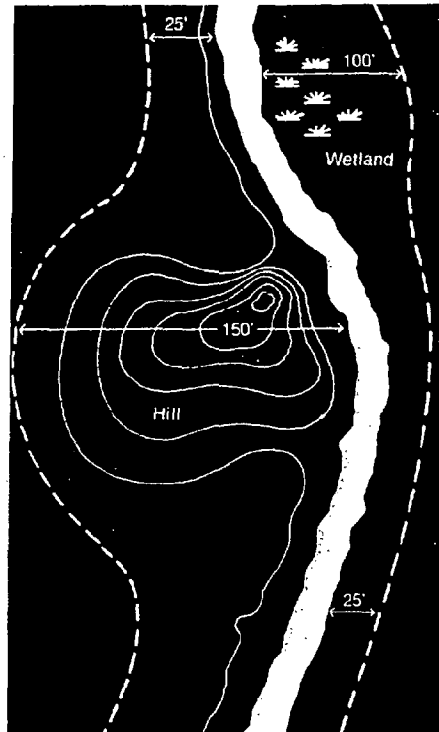
1. Soil type and how surface water filters into the ground;
2. Types of vegetative cover and soil stability;
3. Slope of land, and capacity for sediment containment.

See figure below for proposed "floating buffers" along the Hackensack:

Fixed stream buffer



Floating stream buffer



STREAM BUFFERS

(1)

(1) Performance Controls for Sensitive Lands
Parts 1 & 2, 1975, C. Thurown, W. Tonor.

J. BERGEN COUNTY'S OPEN SPACE FINDINGS:

1. Findings regarding open space as defined by Bergen County's Cross Acceptance Report to the State Planning Commission (Draft, Volume #1, Executive Summary, 1989):
 - o As noted, the Tier system includes the ability statewide for every municipality to designate special zones of high ecological sensitivity and value. Because the Draft State Plan is NOT a zoning plan, however, these "mini-Tier 7" pockets do not automatically become protected. Rather, they signal the municipality's intent to apply such protection tools as:
 - an ecological inventory
 - scenic corridor designation;
 - steep slope designation;
 - freshwater wetland designation;
 - a low density designation with site-specific open space requirements;
 - buffer zones along stream corridors.
 - o Given the rapid disappearance of Bergen's remaining open spaces, it is clear that there is not time enough to wait for the Draft State Plan to be implemented if Bergen's last remaining open spaces are to be protected. Preserving these areas will be critical to balancing land development and infrastructure capacity.
 - o Open space helps reduce congestion, since it generates the least amount of traffic. Open space also helps retain suburban community character and quality of life.
 - o Aggressive completion of the County-wide purchasing plan, Bergen's Last Chance, can promote acquisition of up to 2500 acres.
 - o Establish a voluntary consultative process, between the County and its municipalities, to determine how best to use local Master Planning and zoning tools to protect and enhance our remaining open spaces and to boost the value of private investment already in place and to be created.
 - o Begin local open space protection efforts, particularly through zoning and planning, with the realization that the less open land there remains to protect, the stronger becomes the capacity of zoning to achieve that.
 - o Where appropriate, seek to incorporate environmental inventories into local Master Plans. These serve the purpose of establishing the public value of such resources, making them easier to protect through the various planning and zoning techniques.

2. Policy as defined in Bergen County's Cross Acceptance Report to the State Planning Commission (1989 - Draft):

Policy 1.3 - Land Planning and Development: Contiguous Open Space Lands in Rural Development Areas.

Municipalities, in cooperation with counties and appropriate State departments, should maintain master plans, development regulations, and capital programs which manage the use, intensity and location of development in rural development areas to protect and preserve large, contiguous tracts and corridors of recreation, forest or other open space.

Policy 1.4 - Land Planning and Development: Land Acquisition.

The NJDEP, in cooperation with counties and municipalities, should ensure that open space and recreation lands in environmentally sensitive areas are given high priority for public acquisition in advance of development. Recreation facilities should be environmentally sound and of overall low intensity. Their development should not significantly reduce the level of service of existing public facilities.

K. RIVER CORRIDOR PROPERTY DESCRIPTIONS

BOGOTA

<u>BLOCK</u>	<u>LOT</u>	<u>ACRES</u>	<u>OWNER & ADDRESS</u>	<u>L.P. RIVER</u>		<u>RIPARIAN RIGHTS</u>	<u>PROPERTY ADDRESS</u>	<u>ZONING</u>
				<u>FRONTAGE</u>	<u>P.L. TO WATER EDGE</u>			
113	8		PSZ LAND DEVELOPMENT & CO.				West of NYS & WRR	Vacant lot
113	7		29 Fairview Rd.				West of NYS & WRR	Vacant lot
			Tenafly, NJ 07670					
113	6		Public Service Elec. & Gas Co.				West of NYS & WRR	vacant lot
113	5		Goldberg S. & Co., Inc.				West of NYS & WRR	Industrial
			20 E. Broadway					
			Hackensack, NJ 07601					
113	4		Borough of Bogota					Public Property
113	3		Borough of Bogota					Public Property
113	2		Borough of Bogota					Public Property
113	1		Borough of Bogota					Public Property
72	9.01		Borough of Bogota					Public Property
72	9		Borough of Bogota					Public Property
72	8.01		Perry William					Vacant lot
			432 Passaic Avenue					
			Hasbrouck Heights, NJ 07604					
72	8		Borough of Bogota					Public Property
72	7							
72	6		Amerada Hess Corp.				172 W. Fort Lee Rd.	Industrial
			1 Hess Plaza					
			Woodbridge, NJ 07603					
72	5		Amerada Hess Corp.				224 W. Fort Lee Rd.	Residential
72	4		Amerada Hess Corp.					
72	2		Amerada Hess Corp.					
72	1		Sifford, Ralph W. & Jeanne E.				250 W. Fort Lee Rd.	Industrial
			205 W. Ft. Lee Rd.					
			Bogota, NJ 07603					

<u>BLOCK</u>	<u>LOT</u>	<u>ACRES</u>	<u>OWNER & ADDRESS</u>	<u>L.P. RIVER FRONTAGE</u>	<u>P.L. TO WATER EDGE</u>	<u>RIPARIAN RIGHTS</u>	<u>PROPERTY ADDRESS</u>	<u>ZONING</u>
72	1.01		Sifford, Ralph W. & Jeanne E. 205 W. Ft. Lee Rd. Bogota, NJ 07603				300 W. Fort Lee Rd.	Industrial
1	37		Kerrigan, James W. & Dorothy T. 36 Lynn Ct. Bogota, NJ 07603				36 Lynn Ct.	Residential
1	38		Calabrese, John W. 40 Lynn Ct. Bogota, NJ 07603				40 Lynn Ct.	Residential
1	39		Midatlantic Nat'l Bank, TR.R. Walter Trust Department P.O. Box 600 Bogota, NJ 08817				44 Lynn Ct.	Residential

TEANECK

<u>BLOCK</u>	<u>LOT</u>	<u>ACRES</u>	<u>OWNER & ADDRESS</u>	<u>L.F. RIVER FRONTAGE</u>	<u>P.L. TO WATER EDGE N/Y</u>	<u>RIPARIAN RIGHTS</u>	<u>PROPERTY ADDRESS</u>	<u>REMARKS</u>
301	5	.43	Androsiglio, Vincent & Fagano, Barbara 5 Lone Pine Lane Teaneck, NJ 07666	110 +/-	Y			
301	6	.67	Rabinowitz, Norman & Lillian 914 River Rd. Teaneck, NJ 07666	185 +/-	Y			
401	1	28	Fairleigh Dickinson Univ. 223 Montcross Avenue Rutherford, NJ 07066	1,993.5 +/-	Y			
1401	1	12.22	Fairleigh Dickinson Univ. 223 Montcross Avenue Rutherford, NJ 07066	737.5 +/-	Y			
1301	1	23.38	Rutherford, NJ 07666 Township of Teaneck Municipal Bldg. Teaneck, NJ 07666	1254.3 +/-	Y			Maria Andreas Memorial Park
1211	1	.505	Rosenberg, Solomon & Lessile 1578 River Road Teaneck, NJ 07666	50 +/-	Y			
1211	2	.326	Perman, Sara 1568 River Rd. Teaneck, NJ 07666	91 +/-	Y			
1211	3	.284	Lipowsky, Herbert H. & Trudy E. 1560 River Rd. Teaneck, NJ 07666	87 +/-	Y			
1211	4	.243	Starkman, George & Jean 1552 River Rd. Teaneck, NJ 07666	77 +/-	Y			
1211	5	.217	Lederman, Bill & Linda 1275 15th St. Apt. 14E Fort Lee, NJ	70 +/-	Y			
1211	6	.206	Gleitman, Joseph & Ruth a/k/a Renee 1536 River Rd. Teaneck, NJ 07666	60 +/-	Y			
1211	7	.75	Protestant Luth. Cemtry unknown Teaneck, NJ 07666	unknown				

TEANECK

<u>BLOCK</u>	<u>LOT</u>	<u>ACRES</u>	<u>OWNER & ADDRESS</u>	<u>L.F. RIVER FRONTAGE</u>	<u>P.L. TO WATER EDGE N/Y</u>	<u>RIPARIAN RIGHTS</u>	<u>PROPERTY ADDRESS</u>	<u>REMARKS</u>
101	1	1.01	Nardella, J.A. & G.L. & Comorata, J. 30 Galesi Drive Wayne, NJ 07470	121' +/-	Y			
101	7	10.30	Township of Teaneck Municipal Bldg. Teaneck, NJ 07666	1,275' +/-	Y			
212	1	.45	Naprstek, Anna 671 Pomander Walk Teaneck, NJ 07666	75 +/-	Y			
212	2	.20	Unn, Wm. & Josephine 654 Pomander Walk Teaneck, NJ 07666	35 +/-	Y			
212	3	.188	Unn, Wm. & Josephine 654 Pomander Walk Teaneck, NJ 07666	20 +/-	Y			
212	12	1.09	Teaneck, NJ 07666 McBride, Tim 636 Cadmus Ct. Teaneck, NJ 07666	90 +/-	Y			
212	13		Goetz, Martin & Norma 628 Cadmus Ct. Teaneck, NJ 07666	95 +/-	Y			
201	11	7'	Township of Teaneck Administration Bldg. Teaneck, NJ 07666	1,925 +/-	Y			
302	4	.286	Board of Freeholders Administration Bldg. Hackensack, NJ 07601	170 +/-	Y			
302	5	4.9	Fairleigh Dickinson Univ. 223 Montcross Avenue Rutherford, NJ	210 +/-	Y			
302	3	9.05	Fairleigh Dickinson Univ. 223 Montcross Avenue Rutherford, NJ	645 +/-	Y			

<u>TEANECK</u>		<u>OWNER</u>		<u>L.F.</u>	<u>P.L. TO</u>	<u>RIPARIAN</u>	<u>REMARKS</u>
<u>BLOCK</u>	<u>LOT</u>	<u>ACRES</u>	<u>& ADDRESS</u>	<u>RIVER</u>	<u>WATER EDGE N/Y</u>	<u>RIGHTS</u>	
				<u>FRONTAGE</u>			
301	1&3	12.00	Fairleigh Dickinson Univ. 223 Montecross Avenue Rutherford, NJ	888.72 +/-	Y		
301	4	.45	Hampton, Ken & Madeline W. 884 Lone Pine Lane Teaneck, NJ 07666	75 +/-	Y		
1211	8	2.49	Simpson, Charles E. 1500 River Rd. Teaneck, NJ 07666	1102			
1002	1	10.54	Township of Teaneck	9.50			Public
	2	4.10	Municipal Bldg. Teaneck, NJ 07666				Clarence W. Brett Park

NEW MILFORD

<u>BLOCK</u>	<u>LOT</u>	<u>ACRES</u>	<u>OWNER & ADDRESS</u>	<u>L.F. RIVER FRONTAGE</u>	<u>P.L. TO WATER EDGE N/Y</u>	<u>RIPARIAN RIGHTS</u>	<u>PROPERTY ADDRESS</u>	<u>REMARKS</u>
1523	2		Hackensack Water Co. 200 Old Hook Rd.	255	Y		California Avenue	Vacant
1524	1		Harrington Park, NJ 07640 Hackensack Water Co. 200 Old Brook Rd.	610			Pine Avenue	Industrial
1301	1	.64	Harrington Park, NJ 07640 Borough of New Milford 930 River Rd.	110			Washington Avenue	Public
1301	2	1.07	New Milford, NJ 07646 Hackensack Water Co.	150			Main Street	Vacant
1309	1	16.8	Hackensack Water Co.	1200			Madison Avenue	Industrial
1308	1	4.6	Hackensack Water Co.				Madison Avenue	Public
1109	4	8.3	Board of Education 817 River Rd.				Madison Avenue	
1109	3		New Milford, NJ 07646 Gassib, Joseph E. 421-A Hudson Street	115'			198 Madison Avenue	Vacant
1109	2		Hackensack, NJ 07601 Laurjo Construction Co. 421-A Hudson Street				196 Madison Avenue	Vacant
1109	1	3.85	Hackensack, NJ 07601 Borough of New Milford				West Park Drive	Public
1101	11-5		Residential					
901	2	3.58	Borough of New Milford	890'			Columbia Street	Public
901	1		Maxwell, Thomas S. & Valerie 147 River Edge Avenue New Milford, NJ 07646 Residential	155'			147 River Avenue	
906	1,5 7-14							
906	15	.31	Borough of New Milford				Columbia Street	Public
906	16-19		Private Ownership & Vacant					

NEW MILFORD

<u>BLOCK</u>	<u>LOT</u>	<u>ACRES</u>	<u>OWNER & ADDRESS</u>	<u>L.F. RIVER FRONTAGE</u>	<u>P.L. TO WATER EDGE N/Y</u>	<u>RIPARIAN RIGHTS</u>	<u>PROPERTY ADDRESS</u>	<u>REMARKS</u>
501	12		Mansold, Francis 20 Clark Street DuMont, NJ 07628	194			Henley Ave	Vacant
501	17		Public Service Elec. & Gas Co. 80 Park Avenue Newark, NJ 07104	520			Columbia Street	Industrial
503	2	14.9	Borough of New Milford				Columbia Street	DPW Garage
301	2	16.39	Borough of New Milford					
305	27	5.46	Bergen County					
305	3	1.35	Borough of New Milford					
101	1-3		Residential	363 +/-			Steuben Avenue	Residential
101	4		Borough of New Milford	225			Maple Avenue	Public
501	1		Borough of New Milford	200			Steuben Avenue	Public
108	1,10,9 8,7		Residential	444				
111	1-5		Residential					
113	1		Residential					
113	10		Van Hook, Joseph 41 Olcott Rd. Hewitt, NJ 10977				1 Old New Bridge Rd.	Industrial

HACKENSACK

<u>BLOCK</u>	<u>LOT</u>	<u>ACRES</u>	<u>OWNER & ADDRESS</u>	<u>L.F. RIVER FRONTAGE</u>	<u>P.L. TO WATER EDGE N/Y</u>	<u>RIPARIAN RIGHTS</u>	<u>PROPERTY ADDRESS</u>	<u>REMARKS</u>
308B	38B	4.8	City of Hackensack 65 Central Avenue Hackensack, NY 07601	374'	Y		foot of Camden Street	Public
402A	38	4.8	City of Hackensack	140'	Y		Salem Street Exit	Public
402A	24	21.56	City of Hackensack	795			foot of Camden Street	Public
402A	23	1.38	City of Hackensack				Rear River Street	Commercial
402A	9	.56	Karajelian, A.V. H.S. & A 589 Carpenter Place Ridgefield, NJ 07657				350 River Street	prop. out/intro river
402A	10A	.22	Bushman, John & Anna 103 S. Washington Ave Bergenfield, NJ 07621	114.32'	Y & beyond		360 River Street	
402A	10	.229	Vielhouse, James H. & Patricia J. 724 Walnut Dr.	108.22'	Y & beyond		368 River Street	prop. out/intro river
402A	11B	.12	Franklin Lakes, NJ 07417 Davis, Margaret & Harley, Patrick 372 River Street	80'	Y		374 River Street	Vacant
402A	11	.06	Hackensack, NJ 07601 Korteweg, Anthony L. 800 Summit Avenue	30'	Y		376 River Street	Vacant
402A	17B	.25	River Edge, NJ 07661 River Edge, NJ 07661	50'	Y		380 River Street	Commercial
402B	18E		All Brands Auto Sales 396 River Street	90'	Y		396 River Street	Commercial
402A	18D		Hackensack, NJ 07601 All Brands Auto Sales	180'	Y		400 River Street	Commercial
	18G		Astor Realty Corp. 501 Schuyler Avenue	30'	Y		Rear River Street	Commercial
402A	29		Lyndhurst, NJ 07071 Cross, Kevand J. c/o Spotless Auto River & Anderson Street Hackensack, NJ 07601	85'	Y		416 River Street	Commercial

HACKENSACK

<u>BLOCK</u>	<u>LOT</u>	<u>ACRES</u>	<u>OWNER & ADDRESS</u>	<u>L.F. RIVER FRONTAGE</u>	<u>P.L. TO WATER EDGE N/Y</u>	<u>RIPARIAN RIGHTS</u>	<u>PROPERTY ADDRESS</u>	<u>REMARKS</u>
402A	31		Cross, Kevand J. c/o Spotless Auto	80'			424 River Street	Commercial
402A	31		Cross, Kevand J. c/o Spotless Auto					
402A	32	7680 s.f.	River & Anderson Street Hackensack, NJ 07601 City of Hackensack	68'				
402A	40		Auto Sales (Ford)					
	7							
	7B							
404	1	11.8	City of Hackensack	710	Y		River Street	Johnson Mem. Park-Public
500	98	9.5	City of Hackensack	385	Y		River Street	Johnson Mem. Park-Public
500	97	10.54	Three Univ. Plaza Corp. 223 Montrose Avenue Rutherford, NJ 07070			F.D.U.	80 University Plaza Dr.	
500	103	6.99	F.D.U.				100 University Plaza Dr.	
	102		F.D.U.					
504	13	5.98	F.D.U.					Public
504	4	22.4	Bergen County				St, Hwy. RT. 4	Public
504A	12B	2.75	County of Bergen				Hackensack River	Public
504A	13B	13.35	County of Bergen				Hackensack River	Public
504A	17	3.2	County of Bergen				Hackensack River	Public
504A	16A	4.4	County of Bergen				133 Commerce Way	Commercial
504A	14	10.56	Industrial Assoc. c/o9 WWDJ P.O. Box 970 Hackensack, NJ 07601					

<u>RIVER EDGE</u>		<u>OWNER</u>		<u>L.F.</u>	<u>P.L. TO</u>	<u>RIPARIAN</u>	<u>PROPERTY</u>	<u>REMARKS</u>
<u>BLOCK</u>	<u>LOT</u>	<u>ACRES</u>	<u>& ADDRESS</u>	<u>RIVER</u>	<u>WATER EDGE N/Y</u>	<u>RIGHTS</u>	<u>ADDRESS</u>	
805	2		Alexandris, Alex & Siderias, Steven 516 Kinderkamack Rd. River Edge, NJ 07661				Hackensack River	Vacant lot
620	1		Borough of River Edge		Y		Hackensack River	Public land
	2		705 Kinderkamack Rd. River Edge, NJ 07661					
414	3		Borough of River Edge	830'	Y		Hackensack River	Public land
	2		Borough of River Edge	543'	Y		Hackensack River	Public land
	1		Borough of River Edge	375'	Y		Hackensack River	Public land
215	2		Borough of River Edge	425'	Y		Hackensack River	Public land
	1		Borough of River Edge	270'	Y		Hackensack River	Public land
214	1		Borough of River Edge	1520'	Y		Hackensack River	Public land
	1.01		Borough of River Edge	288'	Y		Hackensack River	Public land
1006	1		County of Bergen					
1006	2	1.6	286 Kinderkamack Rd. Corp					
1303	1&2		County of Bergen					
1304	2		County of Bergen				1209 Main Street	
1304	3	1.32	State of New Jersey-DEP NJ Dept. of Env. Protection John Pitch Plaza Trenton, NJ					
1304	1		Bapco Holding Co. 550 Hackensack Avenue River Edge, NJ 07661				550 Hackensack Avenue	
1302	2		Bergen County Hist. Society					
1412	1&2		Heritage Grand Plaza 55 Harristown Rd. Glen Rock, NJ				124 Grand Plaza	Vacant lot
1418	1-4		Residential & Industrial					

ORADELL

<u>BLOCK</u>	<u>LOT</u>	<u>ACRES</u>	<u>OWNER & ADDRESS</u>	<u>L.F. RIVER FRONTAGE</u>	<u>P.L. TO WATER EDGE N/Y</u>	<u>RIPARIAN RIGHTS</u>	<u>PROPERTY ADDRESS</u>	<u>REMARKS</u>
121	1	5.3	Transport of New Jersey 180 Boyden Avenue Maplewood, NJ 07040	580'	Y		Marginal Rd.	
121	2	8.8	PS Electric & Gas Co. 80 Park Place Newark, NJ 07102	730'	Y		New Milford Rd	Commercial
121	3	4.2	Borough of Oradell 355 Kinderkamak Rd. Oradell, NJ 07649	510'			Marginal Rd.	Public Public
121	5	1.51	UF Heil Construction Co. In 447 New Milford Avenue Oradell, NJ 07649	495'			447 New Milford Ave.	has ROW commercial
121	6	1.31	Hackensack Water Co. Attn: R. Colacci 200 Old Hook Rd. Harrington Park, NJ 07640					has easement Industrial
122	1	2.92	Hackensack Water Co.					
123	1	13.31	Hackensack Water Co.					
120	1	28.4	Hackensack Water Co.					
1205	1	2.8	Borough of Oradell	792'				Vacant part. under water
1205	4	.12	Wilson, Douglas S.& Neubauer, S.A. 286 Genther Avenue Oradell, NJ 07649					Vacant part. under water
1203	3	1.29	Pagano, Ronald P. 55 Harristown Rd. Glen Rock, NJ 07542	259'			286 Genther Ave.	Vacant part. under water Residential
1203	2	.95	Borough of Oradell				590 Center Street	Residential
1203	1	.30	Borough of Oradell	315'			Maple Avenue	Public
1206	1-14		Residential	154'				
1104	1	.07	Borough of Oradell					

A. ACQUISITION PROGRAM

- o Select parcels containing natural features, scenic views, open space, wetlands, etc. can be protected with adequate implementation machinery.
- o Various acquisition techniques are available which may be used in combination. In other words, acquisition should not be limited to only one type of program.
- o A natural features program (beyond the scope of this study) should evaluate, identify and locate natural features to be protected. For the purposes of this report, preliminary field investigations were performed for open space acquisition. An individual feature or parcel selected for acquisition (whatever type) may be unique in itself, whether for environmental, recreation, educational, or its inherent natural beauty; or it may have significance as part of a greenway or blueway system.
- o In all cases the areas considered for "acquisition", (see text for types) should be considered in terms of existing and adjacent "as of right" uses which may compete or jeopardize the goal of open space preservation. The resources available for the features (or parcels) protection should be investigated.

MEANS

1. Zoning

- a. Zoning laws may be adapted/enhanced for preserving natural features, scenic views, open space, wetlands, etc., by means of a Specific Zoning District:

- Conservation District
- Aquifer Protection Overlay District
- Floodplain District
- Historic District
- Special Scenic View District
- Tidal Corridor District
- Wetlands Conservation District.

These special districts are for protecting forested areas, prevention of development and erosion, as well as ensuring the natural beauty of the area remains natural and beautiful. In incorporating or adopting any of these districts to the Hackensack Corridor, all developments which would potentially have a negative effect on the area to be protected would automatically trigger a vigorous review process, such as:

- Conservation Board Review
- Hackensack River Commission
- Bergen County Planning Board
- Town Board
- SEQRA Type Review
- DEP
- Coastal Resources

Some of these regulations and procedures are in place, others would have to be adopted via resolutions, etc.

- b. The County and local planning officials, because of their inherent role and responsibilities, should continue to work with each other to ensure comprehensive planning protection and have a central role in Hackensack River Corridor. A dialogue between the six boroughs and the County is an excellent technique for joint parcel acquisition and establishing a framework for immediate evaluation of proposed developmental impact to the Corridor. In this way, future development conflicts can be avoided or satisfactorily mitigated prior to approval or denial, potentially saving significant sums of money on behalf of the public agencies and legal fees for the developer, private landowner and the government.
- c. The need for an interagency or interborough Environmental Policy Board specifically for the Hackensack River Corridor with respect to developing environmental and developmental review (possibly as a review agency and not as a declaratory board) of matters affecting the Corridor.

2. The Acquisition Tools:

The tools available for the protection of natural or significant areas, wetland, etc., are many and varied. The acquisition techniques are of two main categories:

- a. Techniques for controlling new development to conserve or protect special natural areas.
- b. Techniques for acquiring and/or designating areas for preservation conservation.

Although listed separately, the above techniques can be used in conjunction. For example, a subdivision may be required to "cluster" (NYS #281), and in the process the land available for conservation is ideally consolidated and may be set aside for recreation, public usage, via an easement or even dedicated to the Town as part of the approval process with covenants and restrictions to ensure its protection as a special natural area or as open space.

It is clear that no single approach is mutually exclusive. The character, history and environmental setting of each parcel and its relation to others shall determine which use is appropriate.

Usage for general purposes of this study is open space preservation, and in select areas, a pedestrian pathway system. With this usage in mind and the type of existing ownership of a given parcel designated for preservation, we can identify the acquisition technique(s) which might best be suited. Selecting the best technique may subsequently depend upon the County's or private resources.

As many properties may require immediate action to avoid development, several alternatives that may be ideal from the County's viewpoint may

require State or Federal enabling legislation, grants, bonds, etc. which may not be implemented in the time frame required. Other options previously discussed, such as special districts, would also require lengthy lead time and possibly increased tax burden which also may not be implemented in time for specific immediate acquisition(s).

3. New Development

- a.
 - o Modify existing agency guidelines to mitigate development.
 - o All utilities to be underground.
 - o Minimize grading and drainage perturbations.
 - o Allow existing drainage system to remain.
 - o Public sewers trunk lines not allowed in natural area or open space parcels.

b. Upzone

- o Any development in a greenbelt area should be at low densities.
- o Minimum recommended density would be A-Res. - 30,000 SF or A-1 Res. - 40,000 SF.

c. Institutional Development

- o In the best interest of open space where industrial development is involved, an adoption of reduced FAR (floor area ratio) in the Corridor or related conservation area should be enacted. High coverage and parking associated with these developments pose devastating effects on the land.

d. Police Powers

In addition to the enforcement powers in effect to protect the public health, safety and welfare, the consultants recommend the following:

- o Require a tree clearing and tree preservation plan submitted by a licensed Landscape Architect or Professional Engineer, incorporating existing and proposed grading facilities and structures.
- o Adopt a cluster ordinance similar to NYS #281 Law.

"The acquisition by the Town and County of such a large area may not be financially feasible. Even if the County were to be able to purchase the entire area, it would take a few years, during which time some critical portions would be lost to development. A substantial enough increase of the minimum lot size to limit development would raise questions of equity and, at least as important, does not meet the objective of discouraging scattered development.

Recognizing the above, the Plan recommends the use of the transfer of development rights (TDR) concept. In a sense, this technique is an extension of the use of Section 281 of Town Law, which allows clustered housing. Clustering is the transfer of the right to build houses from one part of a piece of property to another part. A transfer of development rights is the transfer of the right to build houses from one parcel of property to a different parcel. If the properties are under different ownership, the development rights would be sold when they were transferred. The areas to be saved as open space - the areas from which development rights would be sold - are called "Sending Zones". The areas to which development rights could be transferred are called "Receiving Zones". Sending zones are discussed below.

In order to encourage the transfer of development rights from designated Sending Zones a bonus would be given - a five to one ratio. In other words, while only one dwelling unit could be built on a parcel of a given size within a Sending Zone, the development rights to five units could be transferred to a Receiving Zone. The computation of the density to be transferred would be based on a mathematical formula. In contrast, under clustering, the yield of a piece of property is based on how many units can be placed on a given parcel in a conventional subdivision, with an inevitable loss from roads, irregular boundaries, special environmental considerations, etc. Thus the yield of a given piece of property would be greater in the proposed TDR plan than under clustering.

In this way there is an incentive to the owner of the land in the Sending Zone to help achieve an important public purpose. The sale of development rights between buyer and seller would be a private negotiation, but the Town could decide to participate in the market if there were a shortage of buyers or sellers or to prevent development on some critical parcel. Once the development rights have been sold, the vacant land would be required to remain in open space, and the ownership could be transferred to a public or private organization that would ensure that it remain in its natural state. Only privately owned land would be eligible for TDR. Furthermore, transfers would take place within the same school district." *

e. Open Space Dedication

Under this approach, the County would encourage as part of a cluster plan, whether residential or industrial, developers to fund the purchase of natural open spaces specified on a comprehensive park plan or natural river corridor. Where such natural open space is part of the developer's own property, he would be required to dedicate a portion at least equal to the amount of open space that would normally be required on his lot.

* Town of Brookhaven 1987 Land Use Plan, RPPW, Inc., Tarrytown, NY 1987.

The right of municipalities to require the dedication of open space as a condition for subdivision approval is well recognized. This requirement based on the need of recreation or open space generated by the development, the acquisition of which would otherwise impose a burden on the municipality. Normally the developer would dedicate a fixed amount per unit in the development, or as agreed between the agency and the applicant. In cases where the dedication is not suitable for recreation purposes, a cash contribution to an acquisition fund is logical. The fund would be utilized to purchase other natural areas or obtain easements along the Corridor, i.e. private river-oriented property within the FDU campus.

f. Property Development Tax

A tax on all new residential and commercial development used to finance acquisition and development of park, open space and wetland parcels.

g. Special Assessment Districts

A mechanism for self-assessment within a benefited area. It is normally petitioned for by a local area and must be approved by a large majority of the owners. Some type of charter amendment would be required.

This system is unique in that all landowners, including developers, within the local area would contribute toward the cost of acquisition.

h. Easements

The varieties of public (or semi-public) interests that might be appropriate in natural areas such as will depend on the use of these areas by people, the maintenance or management requirements (if any) and the interests of the owner. Sections of New Jersey State's General Municipal Law establishes open lands preservation as a public purpose and authorizes expenditure of public funds for the acquisition of fee titles or lesser interests (i.e. easements) in such lands.

Some areas which should be preserved in their natural state do not have to be made accessible to the public. The acquisition of conservation easements would be appropriate in these areas. The interest to be acquired might simply be the development rights. We are assuming now that the development rights would simply be relinquished and not exercised anywhere else. This is the simplest type of conservation easement. If development rights are acquired by the County, the owner would continue to enjoy exclusive rights to possession of the land and use of it for

permissible activities such as gardening, passive recreation or camping. The County, by acquiring development rights instead of full fee title, avoids maintenance responsibility and keeps the land on the tax rolls, though at a reduced assessment.

Conservation easements may, and often should, do more than remove the right to develop property. They may also include specific provisions allowing right of entry to perform special jobs which are necessary to preserve, maintain or restore a natural area or feature.* Easements may also be acquired for maintenance of public trails across private lands. In the Hackensack River Corridor, the package of rights acquired from an owner might in some cases include all three types of easements - development rights, right of entry and maintenance of trails, and possibly some others as well. A scenic easement may be acquired to preserve a view. This would restrict development on the owner's land, where total elimination of development rights is unnecessary, and would be an alternative to the use of zoning regulations for scenic view protection.

For natural areas which should be open to the public in their entirety for recreation use, even if only for hiking and nature observation, more than a conservation easement is needed, most likely a long term lease or full title. Acquisition could be by the County, the State, the Borough or by a private non-profit conservation organization (i.e. Land Trusts, etc.).**

i. Donations

Some owners, if given opportunity, might be persuaded to donate a conservation easement to the City, to a conservation trust or to some other private non-profit conservation organization. Some would even be happy to donate fee title to their land. The motivation may be a combination of love for the land in its natural state and relief from burdensome property and income taxes. The value of the donation is deductible from gross income for purposes of income taxes. New Jersey State law provides that for purposes of real estate taxation land restricted by an easement must be valued in accordance with the restrictions (Sections of the General Municipal Law). These tax benefits might compare favorably in some cases with the net benefits from transfer of development rights to the developer.

To maximize the potential of land donations, a program of land philanthropy should be organized. A grass roots program of this kind in Bergen County could be focused on the specific areas selected by the County for conservation in the Greenbelt, Bluebelt and other areas of the Corridor. Major landowners would be contacted for their consideration of land donations. The intent of the donor can be reflected in detailed provisions in

* See "Conservation Easements" by Charles C. Morrison, Jr. in NYS Environment, November 1, 1971 published by The New York State Department of Environmental Conservation.

** HLW, 2 Park Avenue, New York, NY, 10016, 1974.

the deed concerning the land's future use and maintenance. If it appears usefull, a reverter clause can be included so that the land would automatically revert to its previous owner if the deed restrictions were not honored. To avoid weakening the donor's ability to take income tax deductions, the right of reverter could be assigned to a third party.

Donations can also take the form of long term (99 year) leases to the City or a private organizaition for a dollar a year. The lease would be subject to termination if covenants designed to protect the area were violated. Many philanthropically minded persons are predisposed to make their donations to private organizations such as The Nature Conservancy or a local counterpart. Land trusts organized for conservation purposes can also receive donations. Donors are apt to have confidence in such organizations, since they have but one purpose, that of conservation. Counties and states are beset with many kinds of conflicting land use needs and sometimes seem indifferent to philanthropic offers. However, they are actually or potentially excellent recipients themselves. With the establishment of a public conservation agency, the County or State would have to be equipped to encourage land and money donations for conservation purposes.

The availability of funds to manage and maintain natural areas is an important consideration bearing on the capacity to accept land donations. Local governments are usually better equipped than private organizations to undertake the maintenance and management services over a long period of time. The responsible private organization, while particularly interested in sanctuaries and other unique natural resources which require care, as well as protection from the bulldozer, is generally reluctant to acquire such areas unless it is assured that it will have the capacity to manage them adequately. Its interest in acquiring such areas is therefore apt to depend on the availability of endowment funds for their maintenance or access to civic volunteers to do the work free.

If the costs of managing certain kinds of natural areas, notably wetlands and wildlife sanctuaries, could be funded by the State, County or Borough, private organizations would be able to extend their land acquisitions considerably. Any assistance of this kind should be predicated upon public access to such areas. Land donations may be supplemented by charitable contributions to a fund for acquisitions and maintenance of an outstanding local natural resource. This can be a very popular cause - equally popular and very similar to the preservation of a notable historic, scenic or wetland areas.*

* HLW, 2 Park Avenue, New York, NY 10016, 1974.

j. Public Acquisition; Aid Programs

Federally aided acquisition. There are two major Federal programs for open space acquisition and development which provide a 50/50 match of Federal and local funds. One, the Department of Housing and Urban Development's Open Space Program is principally for acquisition, only minimal amounts are for development. This program's emphasis has been on open space areas of moderate size in high density localities. Only limited Federal funds are currently available.

The other program is the Federal Land and Water Conservation Fund, administered through the State by the Bureau of Outdoor Recreation in the Interior Department. Grants under this program are for both acquisition and development. The local share can be raised by the County, the State or a private organization. A 13,000 acre wilderness tract in the Adirondacks was recently acquired under this program. The local share consisted of private funds contributed to the Adirondack Conservancy, a subdivision of The Nature Conservancy, which acquired the tract with the help of a Federal matching grant and turned it over to the State.

Land could be acquired for the County in the same way. As a prerequisite, a comprehensive park development plan must be filed covering at least an entire borough. With matching funds from the County, or a private group, application may then be made through the State to the Federal Bureau of Outdoor Recreation Land and Water Conservation Fund for a grant to acquire any park included on the plan. At the present time only limited Federal funds are available under this program.

State Programs. For New Jersey the most useful kinds of State programs for conservation of natural areas are:

1. Those in aid of local municipalities dedicating publicly owned wetlands to conservation (i.e. Green Acres).
2. Those involving state acquisition of unique natural areas or significant areas of open space near urban centers (i.e. Green Acres and/or local bond issue programs).

County Purchase with Full Payment Deferred. If a designated natural area is to be acquired by the County, a temporary shortage of funds for purchase need not be fatal. By negotiating with a view toward understanding the landowner's needs and interests, economic and otherwise, it will frequently be possible to work out satisfactory arrangements whereby the County avoids a large immediate payment and still secures the area.*

* HLW, 2 Park Avenue, New York, NY 10016, 1974.

k. Coursewater Councils

A new and promising government response to the opportunities and constraints of environmental conservation is the creation of a Conservation Board or Commission. This can be an arm of local or regional government. This would establish clearly defined focal points and review criteria for the Hackensack River Corridor and related municipal environmental conservation.

l. The Land Trust - Natural Area Conservation Through Private Action

Effective conservation of open space cannot depend solely upon government acquisition in fee - there is simply not enough public money available. For this reason, a primary focus of our effort has been to investigate and evolve ways to acquire open space through private, as well as public means, including such innovative land use, regulatory devices and administrative, legal and fiscal devices as described earlier.

A very successful device, which has been widely used in the Northeast, is the land trust which can benefit the landowner financially while promoting the conservation of natural areas. Land trusts make it possible to protect streams, valleys, greenbelts, and other natural areas. Land trusts can receive gifts of land or money, purchase land, receive or purchase scenic and conservation easements, develop other types of restrictive trust agreements with property owners as needed, and perform maintenance functions. They can hold the property or convey it to other private interests or to the government. Private institutions have helped to preserve millions worth of private land for public or quasi-public open space uses in both New York and New Jersey.

There may be restraints in the laws of New Jersey State which present obstacles to the creation of the New England type of local land trust. In the absence of a quasi-public institution, national, non-profit organization can perform the functions of a land trust. The Nature Conservancy, for example, has acquired many parcels in New York and New Jersey.

An outstanding success in the northeast is the Berkshire County Land Trust and Conservation Fund which was organized by the Berkshire Resources Council, Inc., a non-profit citizen-supported service agency which assists the town and cities of Berkshire County in conserving the natural resources of the Berkshire. The preferred and recommended approach of these two groups working in tandem is not to take land as gifts but to take easements and have the owners or properties continue to maintain them. Local organizations such as The Hackensack River Coalition have also acquired land for little or no fee along the subject study area.

These private open space organizations benefit the public in many ways besides saving scarce public funds. Land use trusts can perform the troublesome and expensive function of maintenance. They can provide a broad based membership organization for concerted conservation actions such as advocating and supporting environmental bond issues, capital budget allocations and other related public activities. At the Federal, State and County levels, the time gap between authorization of purchase and appropriation of funds for open space can be significant and costs can rise precipitously in the interim. Land trusts and non-profit open space organizations can move quickly to secure options on the land and thereafter sell to the government at the original price.

Another major advantage is that many individuals who might be willing to donate land, or money, or partial use of their land are unaware of how to do so - or whom to contact. In addition, some individuals reluctant to donate land interests directly to local government may be willing to donate them to a non-profit land trust.

As the Municipal Conservation Commission Handbook of the State of New Jersey states: "The ingredients of a valid trust agreement are fairly simple - a valid public purpose, a trust property, a trustee, and a beneficiary. Where a landowner makes an agreement with a local trust respecting the use of his land, his intention is the law. He may specify what he likes. He may or may not intend a gift, and he may, for example, retain certain interests or keep a like interest, or specify the right to revoke or amend the trust. The trust mechanism offers a way to preserve in perpetuity the restrictions which the landowner alone could not stipulate, for the trust itself can be immortal."

For the private owner the following benefits can be received through land trusts:

- Assurance that his original conservation intentions will be followed after his death, or after his sale of any remaining land interest to another party;

- o Federal, and perhaps, State and local tax credit based upon his donation to a properly certified, charitable, non-profit organization.

- o The opportunity to work with local groups (perhaps the local chapter of a national organization) and write his own requirements and wishes into an open space conservation agreement.*

* HLW, 2 Park Avenue, New York, NY 10016, 1974.

4. Summary

The aforementioned techniques have shown that a variety of approaches can be utilized in preserving and acquiring the Hackensack Corridor's remaining natural areas and/or facilitating a greenway/blueway via a pathway system. Where desirable, these can be adjunct with other methods for the most part utilizing the most efficient use of capital expenditures.

The selection of the best approach will depend on the size and character of the natural area, the kind of protection it needs and the kind(s) of ownership and/or management that will "steward" those needs. See the Hackensack River Corridor Acquisition Matrix for site specific recommendations, as well as the Conceptual Master Plan.

V. LOCAL SUPPORT FOR CORRIDOR IMPROVEMENTS

LETTERS

Lake Hackensack Park: a dream that ought to come true

Editor, The Record:

Congratulations to Jim Ahearn for his fine article about the Lake Hackensack Park proposal (The Record, Jan. 3). Reading about the long history of this idea reminded me of when I was the mayor of Teaneck.

How excited we were then at the prospect of having this beautiful recreation area in our community and in neighboring towns along the banks of the Hackensack. Unfortunately, this lovely dream was not to be realized at that time.

Imagine how pleased I am to learn that this proposal has risen once again, like the phoenix, from the ashes. There is new momentum and enthusiasm for its implementation. It deserves our wholehearted support. I stand ready to do what is necessary in Trenton to facilitate the implementation of this plan.

I agree with Jim Ahearn that this would be a wonderful year 2000 gift from this generation to the next. Let's not drop the ball this time.

MATTHEW FELDMAN

Teaneck
The writer is the senator from the 37th District.

Editor, The Record:

James Ahearn's article advocating the transformation of the Lake Hackensack River into a lake and recreation area dovetails with a legacy left by a young Fairleigh Dickinson University biology professor whose obituary appeared the same day.

Richard L. Jacques, a noted geologist and assistant dean of FDU's College of Science and Engineering, envisioned an extended river walk on the university's property along the Hackensack. Jacques, who died Jan. 1 at age 42, had developed a campus beautification proposal in which he said, "The river should become the focal point of the campus."

He wanted to see the existing river walk, behind Robison Hall on the Teaneck campus, extended north to the pedestrian bridge, with attractive wooden benches, every 75 to 100 feet, facing the river. He called for a similar walkway with benches and lights on the river's west bank, stretching from FDU's College of Dental Medicine to the Rothman Center, the university's new, state-of-the-art recreation and athletic facility. These are relatively modest plans compared to the parks, lake,

The park would be a wonderful year 2000 gift from this generation to the next.

picnic and boating facilities, and pedestrian and bicycle paths described in Mr. Ahearn's article. But they are all part of the same dream: investing in the beautification of a river and its environs to improve the quality of life.

The Record article mentions the FDU pedestrian bridge, connecting the two segments of the Teaneck-Hackensack campus, as part of a proposed bicycle loop bordering the east and west banks of the river. Coincidentally, the university's recently revamped master plan suggests addition of a second pedestrian bridge connecting out dormitories on the east bank with the Rothman Center.

From the university's point of view, a well-planned beautification project for the river, carefully implemented, with proper consideration for the environment, would enhance our Teaneck-Hackensack campus and be a boon to our students and the community at large. But there must be a commi-

society and the lands adjacent to it. We would like to keep the quiet rural nature of the site, and being a historical society, we lean toward "interpretation and restoration" as opposed to "development."

The New Bridge Landing Historic Park has been geared to the years when the Hackensack River was a major artery for commerce, and we would like to see more historical and archaeological research.

Along that line, one slight correction should be made to the sketch which accompanied the article. There was a tidal mill at the entrance of Coles Brook (1895-1852), and that spot should not be disturbed without careful archaeological investigation. The proposed bridge crossing could be relocated a little to the south.

Brett Park in Teaneck also has the remains of several early and historically important sites.

The Bergen County Historical Society would like to work with Teaneck on the research and interpretation of this expense without disturbing the quiet beauty and beautiful old trees in the area. The old bridge across the Hackensack in this neighborhood is an-

other concern. According to our research, it is the oldest remaining iron-truss swing bridge of its kind still standing in the state and the society. The bridge will be 100 years old in February 1989 and is owned by Bergen County.

The really disturbing blight in the area is the auto salvage yard on Main Street and Hackensack Avenue in River Edge, which the society would like to see removed. The land could be used as an entrance to the recreation area and, zoned for conservation, would act as a buffer. It could also be used for visitors' parking.

It should be noted that a dam across the lower section of the river would affect the natural environment and change the salt water marsh to a fresh water marsh. The creation of this park should not hinge or be held up by the building of this structure. We have a wealth of natural beauty that should be preserved and taken advantage of.

BETTY SCHMELZ
River Edge

The writer is chairperson of the Bergen County Historical Society's Site Development Committee.

